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2024 LDC U.S. LATINOS IN TECH REPORT: AI™

FOURTH ANNUAL EDITION

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MESSAGE FROM THE LDC

Dear Partners and Readers,

We present to you the 2024 LDC U.S. Latinos in Tech Report: AI - Fourth Annual Edition, an analysis that highlights the critical role of the U.S. Latino community in driving technological innovation and economic growth in the AI sector. This year's report underscores the dynamic contributions of Latinos as both early adopters and leaders within the rapidly evolving landscape of Artificial Intelligence. Their crucial importance in the workforce cannot be overstated, as Latinos are increasingly becoming the backbone of America's future tech labor force.

As AI continues to revolutionize industries, the U.S. Latino population—now nearly 20% of the national population and the youngest demographic group—is positioned to shape the future of this transformative technology. The data within this report reveals that Latino representation in technical roles within AI has grown significantly, outpacing broader U.S. trends. This is a testament to the community's resilience, adaptability, and forward-thinking approach, despite persistent challenges in achieving representation at senior levels within major tech companies, as shown in this report.

Moreover, the report provides key insights into the alignment of Latino demographics with AI job growth, highlighting states like California and Texas as important regions where Latino talent and technological opportunities intersect. This strategic positioning is not merely a coincidence but a reflection of the broader demographic shifts that are reshaping the American workforce and economy.

The implications of these findings are profound. As we continue to witness the surge of AI adoption across sectors, the inclusion of Latino talent is not just an equity imperative but a business necessity. Organizations that embrace this diverse talent pool will not only enhance their innovation capacity but also secure a competitive edge in the global market.

However, challenges remain. There is still a disconnect between the growing number of Latinos graduating with degrees in engineering and technology and their underrepresentation in the

hiring practices of tech companies, which often opt to bring in talent from abroad. This oversight means leaving significant economic potential untapped, as companies miss the opportunity to integrate a highly skilled and culturally relevant workforce into their operations.

At the Latino Donor Collaborative, we are committed to advancing the representation and participation of U.S. Latinos in AI and technology. This report serves as both a call to action and a resource for businesses, policymakers, and educational institutions to harness the full potential of Latino talent in driving the AI revolution.

We invite you to explore the data, insights, and recommendations presented in this report and to join us in fostering an innovative and prosperous future where Latinos are integral to the continued technological advancement of our nation.
Wishing you continued success,

Ana Valdez
President and CEO,
Latino Donor Collaborative

About Latino Donor Collaborative

The Latino Donor Collaborative (LDC) is a non-profit and non-partisan organization that creates original economic research about the Latino/Hispanic community in the United States.

Our data are used by decision-makers and resource allocators to promote growth in the new mainstream American economy. Together with our partners at top U.S. research centers, we produce fact-based data to identify opportunities.

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About Conectado

Conectado is an immersive educational experience that harnesses the power of AI to increase Latino representation in STEM. It offers a comprehensive ecosystem of resources, relationships, and opportunities. The platform "Conectadoverse," provides a 3D interactive experience, connecting users with mentors, educational institutions, businesses, and social impact organizations dedicated to improving representation of underrepresented communities. Our value proposition is to create a holistic, supportive environment that fosters both personal and professional growth for Latinos in technology.

MESSAGE FROM GUILLERMO DIAZ, JR

Founder and CEO

On behalf of Conectado Inc. and the communities that we serve, I am honored and proud to once again partner with the Latino Donor Collaborative and Wells Fargo on the 2024 LDC U.S. Latinos in Tech Report: AI - Fourth Annual Edition. This year, we partnered with Arizona State University to broaden our research into the compelling intersection of technology and the economic power of the Latino cohort.

In 2023, we explored the transformational changes brought about by the rise of AI, particularly Generative AI, and their unique connection to the growth in economic, employment, and educational impact within the Latino cohort—which I referred to as a 'Lightspeed Moment.' Now, just one year later, we are pleased to share significant findings from our research and real-world experiences regarding the progress in AI adoption and its economic impact. Additionally, we have observed notable advancements in the workforce and education, particularly in STEM fields related to AI.

In this report, you'll discover how opportunities align with the geographic distribution of Latinos—from the classroom to careers to real GDP growth. This isn't just about diversity; it's about driving real growth for the U.S. as the global technology superpower. While we've seen significant progress, much work remains to be done. Despite the positive strides, Latinos are still underrepresented relative to their population. Therefore, government, business, and academia must quickly align to ensure we maintain our leadership as a nation.

AI will impact every aspect of our professional and personal lives. As it reshapes every occupation, it is time to upskill and reskill. We are living in an unprecedented moment - The future of AI is Latino.

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PRODUCED BY

The Latino Donor Collaborative
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EXECUTIVE SUMMARY

Welcome to the fourth edition of the LDC U.S. Latinos in Technology: AI report. This report examines the convergence of the rapid rise of artificial intelligence (AI), particularly generative AI, with the growing influence of the Latino population in the United States. In it, we highlight a pivotal moment where these forces are driving significant economic growth, increasing productivity, and the creation of new business markets. The Latino community is not only capitalizing on these technological advancements but is also positioned to further accelerate its impact with strategic support from academia, government, and industry.

Over the past 24 months, AI has profoundly transformed the global economic and technological landscape. A recent McKinsey Global Survey reveals that AI adoption among organizations has soared from 20% in 2017 to 72% in 2024. This surge suggests that AI could contribute a staggering $15.7 trillion to the global economy by 2030. Additionally, private investments in generative AI have grown eightfold since 2022, reaching $25.2 billion, indicating strong industry confidence in AI's transformative potential.

The United States continues to be a global leader in AI, being home to eight of the world's ten most valuable companies, with seven being tech giants deeply invested in AI. Corporations such as Apple, Microsoft, Nvidia, Alphabet, Amazon, and Meta are at the forefront of AI innovation and job creation, while catalysts like OpenAI and Anthropic are reshaping the landscape with significant advancements in generative AI. Importantly, many of these tech hubs and their jobs are located in areas with significant Latino populations, further aligning AI's future with the Latino community.

Latino-owned businesses are adopting AI at double the rate of their white counterparts, with 14% of scaled Latino-owned businesses utilizing AI technologies, compared to 7% of similarly scaled white-owned businesses. This proactive approach highlights the strategic integration of AI into Latino business operations. Moreover, Latino youth are engaging with AI at higher rates than their white peers across various activities, including information gathering, image creation, music production, and job-related tasks.

The integration of Latinos into the AI workforce is also advancing rapidly. Between 2018 and 2022, the number of Latinos in technical AI roles surged by 48.7% to 58.7%, outpacing the broader U.S. workforce's growth of 10.8%. By 2022, Latinos held 9.1% to 10% of these technical roles, a figure that, while impressive, is not yet commensurate with the Latino share in the U.S. population. Encouragingly, Latinos are making strides in major NASDAQ-listed companies. Notably, Latinos staff 28% of technical roles at Tesla and 25% at Qualcomm, underscoring their growing influence in the tech industry.

Demographic trends have shown the critical role of the Latino community in sustaining the U.S. workforce. As the non-Latino working-age population declines, Latinos are providing a vital labor force for the U.S. economy. This is reflected in educational achievements, and more specifically relevant to this report, the proportion of Latinos earning STEM degrees has increased from 9.2% in 2012-2013 to 13.5%, a 101% increase in 2021-2022. In particular, the number of Latino computer science graduates has risen by 180% from 2011 to 2022, now constituting 14.7% of all CS degree holders.

The U.S. government plays a crucial role in fostering this growth through initiatives such as the CHIPs and Science Act of 2022, which allocated $280 billion to bolster domestic infrastructure and semiconductor research and manufacturing. Additionally, $1 billion was invested to ensure that communities, including Latinos, have access to the skills and devices necessary to participate fully in the AI-driven economy.

Finally, this report highlights the need for collaboration between business, academia, and government to expand Latino participation in AI. This alignment is vital not only for fostering innovation but also for ensuring that the U.S. maintains its global leadership in technology. Strategic investments in education and partnerships will be essential to enhancing the AI capabilities of the Latino workforce and integrating their unique perspectives into the broader AI narrative of the nation.

KEY INSIGHTS

AI Adoption Surge: Use of AI has exploded with 72% of organizations using AI in 2024, up from 20% in 2017 (McKinsey Global Survey on AI) and AI expected to add $15.7 trillion to the global economy by 2030. Private investments for generative AI surged, nearly 8X from 2022 to reach $25.2 billion. The U.S. leads in AI with U.S.-based companies such as Alphabet, Amazon, Apple, Meta, and Microsoft playing an outsize role in the development of this technology.

AI utilized by more Latino owned businesses compared to their white counterparts: 14% of scaled Latino Owned Businesses currently utilize AI technologies to enhance their business operations, compared to 7% of scaled WOBs.

AI used by more Latino youth compared to their white counterparts: Latino compared to White respectively - **54% vs 41%** to gather information, **39% vs 24%** to create pictures and images, **27% vs 7%** to make music, **24% vs 10%** for job functions.

AI surge and Latino demographic alignment: The geographical alignment of Latinos with AI jobs, data centers, semiconductor fabs, and Hispanic serving educational institutions underscores the critical role that Latinos play in the technological and economic landscape of the United States.

Latino AI workforce: The number of U.S. Latinos working in technical roles in AI increased by 48.7 to 58.7% between 2018 and 2022, compared to an overall increase of 10.8% in the broader U.S. workforce. By 2022, 9.1 to 10% of these technical roles were held by Latino workers (CSET, 2024).

Latinos in Leading NASDAQ Companies: Latinos already staff more than 10% of technical roles in 11 out of 16 major NASDAQ companies that we considered, reaching a high of **28% at Tesla** and **25% at Qualcomm.** We project this figure to rise as the private sector absorbs recently graduated Latinos with a background in computer science or STEM.

The Latino demographic bonus: These positive developments are partly the result of dramatic shifts within the U.S. labor force that is now more reliant than ever on the Latino population. Between 2021 and 2022, for instance, the Latino population increased by 1.65%, while the rest of the population increased by only 0.08%. This growth, coupled with a cohort that is younger on average, has resulted in Latinos fully offsetting a decline in the U.S. working-age population (18-64 years old).

KEY INSIGHTS CONT.

Educational Attainment: Latinos increased their share of STEM degrees from **9.2% in 2012-2013 to 13.5% by 2021-2022**. In fact, the number of **Latinos awarded a degree in STEM increased by 101.6%** from the academic years 2012-2013 to 2021-2022, the highest of any group we considered. The number of Latino computer science awardees jumped by 180% between 2011 and 2022 and now make up 14.7% of all CS degrees (IPEDS). These positive trends suggest that Latinos will play an increasingly important role within the AI space.

The Importance of Organizational Alignment of Business, Academia, and Government: The rapid pace of AI advancement makes it **imperative** for business, academia, and government to collaborate effectively. The alignment of these sectors coming together to transform the field of technology at large through Latino innovation is key to maintaining the U.S. Superpower status.

CHALLENGES, OPPORTUNITIES & RECOMMENDATIONS

Despite the progress described here, Latinos continue to be underrepresented in senior positions in NASDAQ companies, and in the AI space more broadly. Addressing these disparities will be imperative to ensure the success of the U.S. in the AI race. By leveraging the potential of the U.S. Latino population, the U.S. AI industry can continue innovating and becoming increasingly competitive. Positive change will be driven by the alignment of these three pillars:

1. **Academia:** Academic institutions need to develop AI-based curricula that emphasize skill development for an AI-driven future. Collaborating with industry leaders is essential to align educational programs with the practical needs of the AI workforce, ensuring that our future workforce are equipped with the necessary skills.
2. **Business:** Industry leaders must partner with academia to provide real-world insights and opportunities for students, ensuring that the skills taught align with the demands of the job market. Businesses also play a key role by intentionally recruiting and retaining Latino talent in AI-related roles.
3. **Government:** Government policy is critical in supporting both academic and business initiatives, providing funding and frameworks that encourage educational advancements and workforce development. By promoting policies that foster collaboration between institutions and industries, the government can help ensure Latinos and other underrepresented groups are included in the AI talent pipeline.

THE AI REVOLUTION AND ECONOMIC IMPACT - SURGE OF ADOPTION

1.1 Transformative Impact - Adoption

2023 saw the boom of a transformative technology in Generative AI led by a 100M user spike of ChatGPT in three months. Now, in 2024 we have learned AI and Gen AI was not just a fad - it is a revolution. The adoption of organizations globally to create efficiencies, drive productivity, and create new value and market creation has surged.

Embracing Generative AI: Unprecedented Adoption and Economic Impact

The global and U.S. economies have witnessed the wave of unprecedented transformation, driven by the rapid adoption of Artificial Intelligence (AI) and Generative AI technologies. These technologies are not merely incremental advancements; they represent a revolution that is reshaping every aspect of life and business. Already the economic engine of the U.S., Latinos are participating in full force, leading the wave of AI adoption in building their businesses and in every aspect of how they live, learn and play. From healthcare and finance to transportation and education, AI is redefining industries, creating new economic opportunities, and challenging traditional business models and, as the report delineates, Latinos can be found right on the forefront.

Looking at the last century alone - from the introduction of the mainframe computer to personal computing, mobile, internet, cloud computing, and internet search - each modernization created a tremendous impact on our economy, employment, and education. However, never in human history have we witnessed an adoption of a technology like we have seen with Generative Artificial Intelligence (See Figure 1). “ChatGPT's traffic and usage has skyrocketed since its launch. **The platform received approximately 152 million visitors in its first month.** At its peak in April 2024, the site was receiving nearly 2 billion visits each month (putting it on the shortlist of most-visited websites in the world),” writes Fabio Duarte in Exploding Topics[1].

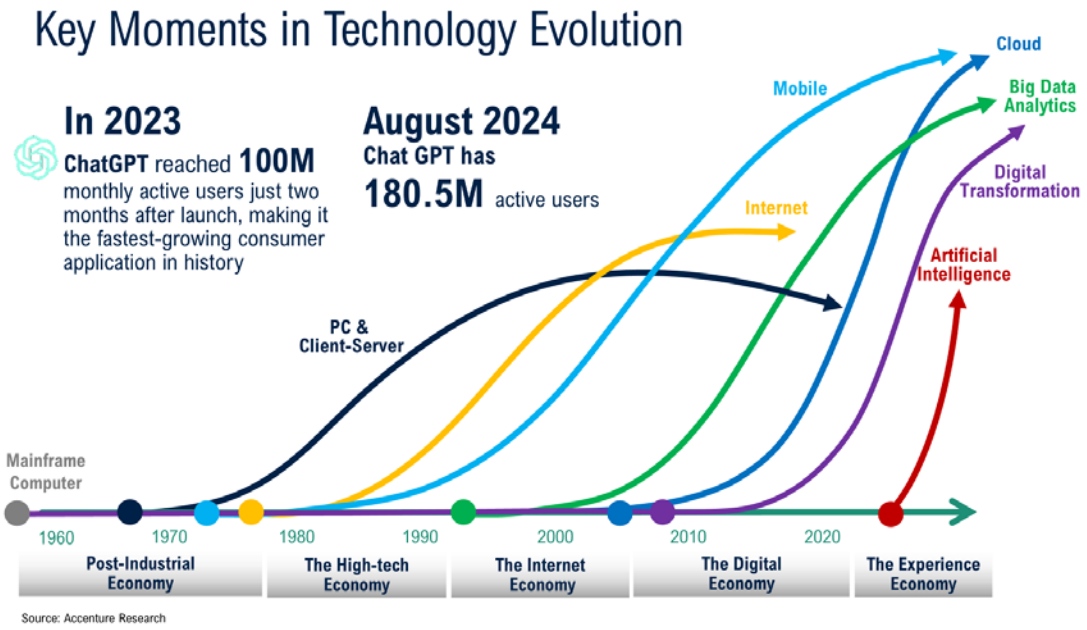


Figure 1: Key Moments in Technology Evolution

In early 2024, the landscape of AI adoption has shifted dramatically, with a growing number of organizations recognizing the transformative potential of AI technologies. **Generative AI adoption** has surged, with **65% of organizations** now regularly using generative AI, thus driving the overall adoption of AI to **72%, up from around 50%** in 2018 (Figure 2). This rapid integration of AI into business operations reflects the technology's ability to improve efficiency, boost productivity, and deliver data-driven insights that empower companies to make more informed decisions, improve performance, keep a competitive edge, and uncover new market opportunities.

The entertainment industry has been greatly affected by AI, with a market valued at $14.8 billion in 2022. This market is expected to continue expanding at a compounded average annual rate of 26% between 2023-2030[2]. As with other disruptive technologies, a large fraction of workers in the industry –34%– expect AI to lead to job losses[3]. However, a number of Latinos in entertainment are already embracing the innovations to decrease costs and accelerate timelines and workflows. We discuss this further in Section 5.5 which also looks at industry consortiums focused on training the new workforce.

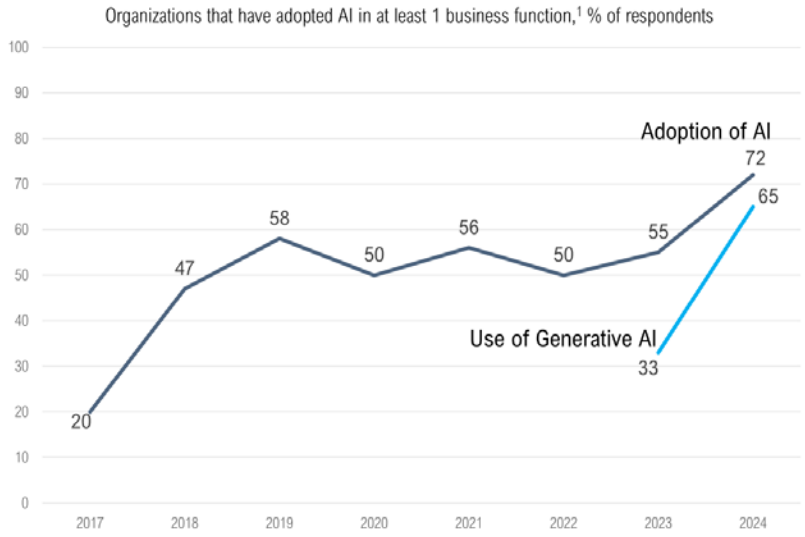


Figure 2: AI Adoption Worldwide has Increased Dramatically in the Past Year, after Years of Little Meaningful Change

1.2 Latino Entrepreneurs and Youth leading AI Usage

Latino Entrepreneurs Leveraging AI to Drive their Businesses

The LBAN State of Latino Entrepreneurship (2023) provides a snapshot of the scope and practices of Latino business owners (LBO), and provides a comparison with non-Hispanic White business owners (WBO). The study finds that among employer firms with at least $10,000 in revenue, LBO are aware and implement AI at twice the rate as WBO (14 vs 7%) (See Figure 3).

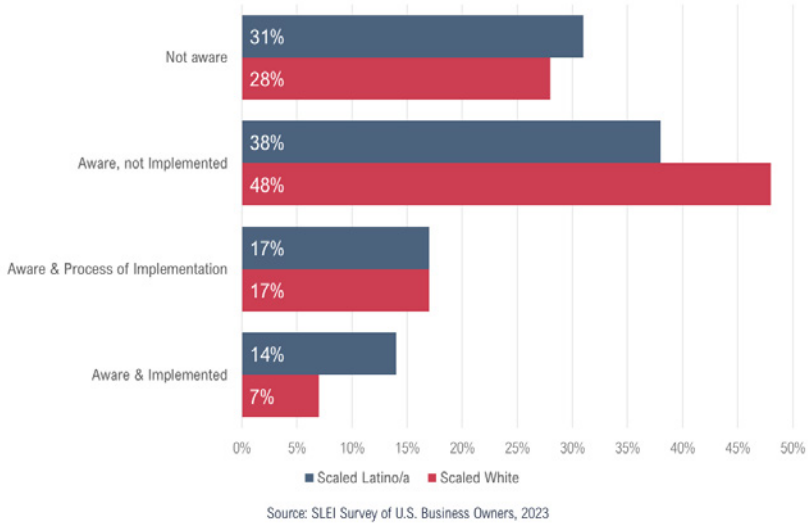


Figure 3: Awareness and Implementation of AI Technologies By Business Size

AI has not impacted workers uniformly. While 19% of workers were employed in jobs that were exposed significantly to AI in 2022, women comprised 21% of those workers compared to only 17% of men[4]. Exposure to AI also appears to vary along race and ethnic lines with 24% of Asians and 20% of Whites reporting significant exposure, compared to 15% of Black individuals, and 13% of Hispanics. Since jobs with higher levels of exposure to AI also tend to be in higher-paying fields, this suggests that adoption of AI could be an important vector for reducing socio-economic disparities.

Latino Youth Leading the Way in AI

The rapid adoption of AI and Generative AI technologies has not only transformed global economies but has also marked a significant cultural shift, particularly among younger generations. Young Latinos want adults to know that the world is changing, and that they, alongside AI, are the future. According to a recent study by Common Sense Media, the growing engagement of Latino youth with AI reveals they are leading the way in embracing these technologies compared to their white counterparts. For instance, 54% of Latino youth use AI to gather information, compared to 41% of white youth. In creative domains, 39% of Latino youth use AI to create pictures and images, far surpassing the 24% of their white peers, and 27% utilize AI to make music, a stark contrast to the 7% of white youth. Additionally, 24% of Latino youth are applying AI for job-related functions, significantly higher than the 10% among white youth.

This data highlights not just a demographic trend, but a broader narrative of how AI is becoming an integral tool for empowerment and innovation among Latino youth, positioning them at the forefront of the digital revolution. As organizations globally recognize the transformative power of AI, these young early adopters are poised to shape the future workforce, driving new value creation and redefining traditional industries.

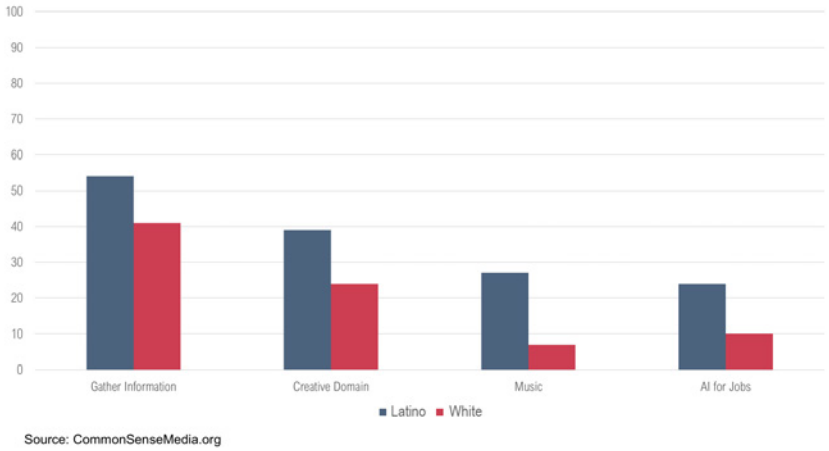


Figure 4: Latino Youth and AI (% of use)

Adapted from: Common Sense Media. (2023). Teen and young adult perspectives on generative AI. teen-and-young-adult-perspectives-on-generative-ai.pdf (commonsensemedia.org)

Key Drivers of Adoption

Several sectors stand out in AI adoption:

- The technology industry accounts for 63.7%, driven by AI's pivotal role in software development, cloud computing, and hardware innovations
- Financial services sector, with a 10.4% share, using AI for fraud detection, risk management, and customer service
- Healthcare and pharmaceuticals followed closely, with 6% of AI adoption dedicated to diagnostics, drug discovery, and improving patient care

AI's integration into business functions has been dramatic, impacting various critical areas:

- Human resources departments reported the greatest cost reductions, with 42% of organizations noting decreased operational costs due to AI
- Additionally, 59% of companies experienced overall revenue growth from AI implementation
- 55% of organizations integrated AI into at least one function in 2023
- High-performing companies, which attributed more than 10% of their EBITA, led this trend

1.3 Global Influence

Investment trends further highlighted AI's growing importance.

In 2023, the United States led the AI investment wave, contributing $67.2 billion. This amount was 8.7 times larger than China, the next highest investor. Such substantial investment underscored the strategic importance U.S. companies and investors placed on AI, highlighting the country's leadership in AI development, innovation, and commercialization. Despite a slight 7.2% decline in global private AI investment, the average investment size still rose to $32.4 million, indicating continued confidence in AI's long-term value.

Looking specifically at Generative AI, this technology area surged to $25.2 billion, nearly eight times the investment from the previous year (Figure 5). Generative AI technologies, like large language models (think GPT-4), saw massive funding boosts, reflecting their potential to transform everything from content creation to customer experience. Companies and investors were clearly betting big on AI's ability to revolutionize industries.

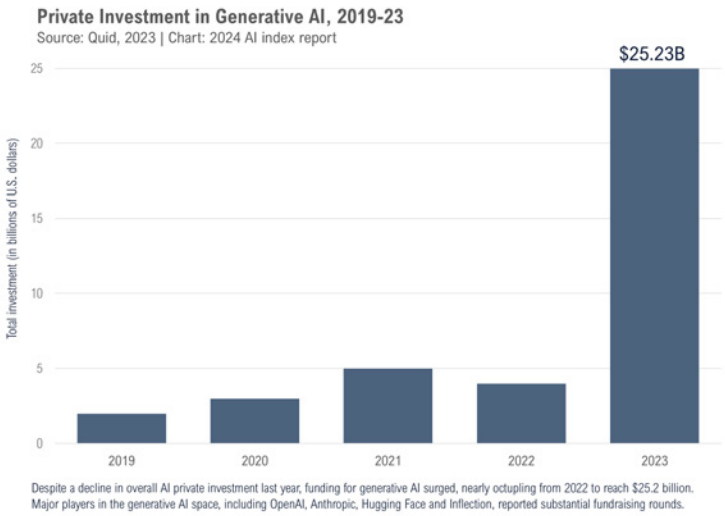


Figure 5: Private Investment in Generative AI, 2019-23

Industry leaders are prioritizing AI which, as noted previously, will bring both disruption and opportunity. Statistics from industry leaders reveal that 47% of top technology officers are prioritizing AI in their budgets, underlining its centrality to future business strategies. These leaders - from chief executive to information security and technology officers - are pivotal in integrating AI into the daily lives of Americans.

1.4 AI as an Economic Driver

As stated previously, AI is projected to add up to $15.7 trillion to the global economy by 2030, making it one of the most significant drivers of economic growth in modern history. This growth will be fueled by AI's ability to improve productivity, create new products and services, and enable the automation of complex tasks. The massive investments in AI (as shown below) by major tech corporations such as Amazon, Apple, Meta, Nvidia, and Microsoft, as well as rising AI models (Large Language Models) like OpenAI, Bloom, Claude, and Cohere exemplify the significant rise in this technology[5].

AI Investments by Top Tech Giants

Amazon (AWS): Investing $100 Billion in AI infrastructure (Forbes).

Microsoft: Investing $3.3B in cloud computing and AI infrastructure (Microsoft), supported by its $63 billion capex in fiscal 2025 (Morgan Stanley) and $13 billion investment in OpenAI.

Nvidia: Allocating $8.68 billion in R&D focused on AI hardware (Ycharts).

Meta: Spending approximately $35 to 40 billion, with a significant portion directed toward AI infrastructure (Yahoo Finance).

OpenAI: Likely investing $4 billion in 2024 (The Information), supported by Microsoft's $13 billion investment.

Apple: Focusing $5 billion annually on AI hardware and software integration (CNBC).

1.5 AI Impact on Global Business Valuation & Market Capitalization

In the past decade, the landscape of the world's most valuable companies has undergone a seismic shift that has dramatically impacted the global economy. A glance at the top companies in 2014 compared to those in 2024 reveals a clear trend: the dominance of technology-centric firms. In 2014, the list of the most valuable companies included a mix of tech titans like Apple and Microsoft, alongside traditional energy and healthcare giants such as ExxonMobil, Johnson & Johnson, and General Electric. Fast forward to 2024, and the scenario has dramatically changed. Today, technology firms like Apple, Microsoft, NVIDIA, Alphabet, and Meta not only dominate the list but have also solidified their positions at the very top (See Figure 6). These firms are headquartered in locations where Latinos are extremely well positioned.

Company	Market Cap 2014 ($B)
Apple	$643
ExxonMobil	$388
Microsoft	$382
Google (Alphabet)	$360
Berkshire Hathaway	$371
Johnson & Johnson	$291
Wells Fargo	$283
General Electric	$254
Novartis	$224
Hoffman-LaRoche	$200
Total	$3,396*

Company	Market Cap 2024 ($B)
Apple	$3,436
Microsoft	$3,110
NVIDIA	$3,064
Alphabet (Google)	$2,015
Amazon	$1,858
Saudi Aramco	$1,818
Meta (Facebook)	$1,334
Berkshire Hathaway	$958
TSMC	$905
Eli Lilly	$830
Total	$19,329

Source: Companiesmarketcap.com
Market Cap in 2024 dollars = $4.53T

Figure 6: Companies by Valuation: 2014 vs 2024

This shift signifies more than just a change in market dynamics; it underscores the central role of technology, particularly artificial intelligence (AI), in shaping the future. AI is not just an add-on but is becoming the core driver of innovation, efficiency, and competitiveness across industries. As we move further into the 21st century, the expectation is that all companies, regardless of their sector, will need to be AI-centric to thrive. This trend is not just about technology companies; it is about every company becoming a tech company at its core.

Nvidia became the world's most valuable company on June 18, 2024, after its share price surged by 3.5%, reaching a market capitalization of $3.335 trillion. This milestone allowed Nvidia to surpass both Microsoft and Apple, solidifying its position as the leading tech company by market value. Nvidia's rise has been driven by the booming demand for its AI processors, which are seen as critical in the ongoing race to dominate artificial intelligence technologies[6].

1.6 AI Impact on Employment

This is evidenced by AI's potential impact on employment which is both dramatic and dual-faced. According to forecasts by McKinsey & Co., automation might displace up to 800 million workers globally by 2030 depending on the pace of adoption. However, this technological shift is also predicted to create new job opportunities, potentially adding between 555 million to 890 million jobs worldwide, thereby balancing out the scales of employment transformation. For example, new roles are emerging, especially technical positions essential for AI implementation. However, all jobs may benefit from AI fluency, potentially increasing productivity by over 20%.

AI is also reshaping non-technical roles, like marketing and sales, by influencing content creation and customer strategies. Roles like AI ethics officers and sales tech enablement specialists are growing. Within the next decade, AI is expected to drive over 60% of customer interactions, raising the need for new skills and activities for sales and call center workers as their roles evolve. These forecasts further validate the concept that every job will be influenced by AI.

THE LATINO DEMOGRAPHIC BONUS

Latinos are the fastest-growing demographic in the U.S., and by 2050, they are expected to make up 29% of the population. According to Brookings and the Census Bureau, from 2020 to 2023 the Hispanic population accounted for 91% of U.S. population growth[7]. This highlights the significant influence Latinos will continue to have on the U.S. labor market, consumer behavior, and economic growth. In 2022, this cohort added 0.7 million people to the U.S. working-age population (those between the ages of 18 and 64), more than offsetting a decrease of 0.3 million among non-Latinos. This trend is the result of the younger average of Latinos, as well as a relatively high population growth rate at 1.65% (compared to 0.08% among the rest of the population).[8]

2.1 Latino GDP

The economic contributions of U.S. Latinos are substantial, with a GDP that would rank as the 5th largest in the world if considered independently. The states where Latinos are the majority, California (41%) and Texas (42%), would add up to become the 3rd largest world GDP. In other words, the U.S. Latino demographic, now nearly 20% of the population and 25% of the youth, is emerging as an economic powerhouse, significantly contributing to the GDP. Since the onset of the pandemic through mid-2023, the Latino population in the U.S. has grown by 3.2 million, a trend that is expected to continue well into the future.

2.2 Drivers of Jobs

Latinos are increasingly contributing to job creation, particularly in sectors like technology, healthcare, and services. The economic influence as outlined in the 2024 Official LDC U.S. Latino GDP Report™ highlights how the rise of AI and technology intersects with Latino education, employment, and economic power is impacting all levels and industries in the United States. The U.S. Latino GDP, currently the fifth largest in the world as a standalone economy, reached $3.6 trillion in 2022, registering a 4.6% real annual growth rate between 2017 and 2022. Moreover, the presence of a substantial number of the Forbes AI 50 companies in states like California, Texas, Massachusetts, and New York, which have significant Latino populations, underscores the critical role Latinos will play in the growing technological landscape. Capital influx is not just about advancing AI; companies will benefit from the increasing U.S. Latino population, their role as a “talent supply chain” and as key drivers of innovation.

At the same time, the pace of scale of AI applications and data will only continue to grow exponentially, alongside ancillary infrastructure, including semiconductors and data centers. The U.S. federal government has pushed for investment in domestic semiconductor research, development, and production through the CHIPS and Science Act of 2022 and semiconductor companies have announced more than $200 billion in U.S. fab investment through 2032. It is not insignificant that the locations of these companies coincide with some of the major locations where Latinos are a significant population and are experiencing the fastest growth, creating a "talent supply chain", a talent map for the AI era and setting the stage for a substantial economic and social revolution.

2.3 The AI Opportunity to Talent Map

Latinos are geographically located where technology and AI opportunities are located. As an aging and retiring workforce shifts from White and other demographics to a fast growing and younger Latino demographic, this cohort will continue to be a vital part of the U.S. economy for decades to come. Latinos are moving into higher-skill, tech-related jobs, particularly in AI and data science, which is reshaping the demographic makeup of these industries. The alignment of GDP by state, population, location of AI centric job roles, regions where AI Data centers are located and the areas where semiconductor fabs are developing shows that Latinos are positioned well for these opportunities (See Figure 7).

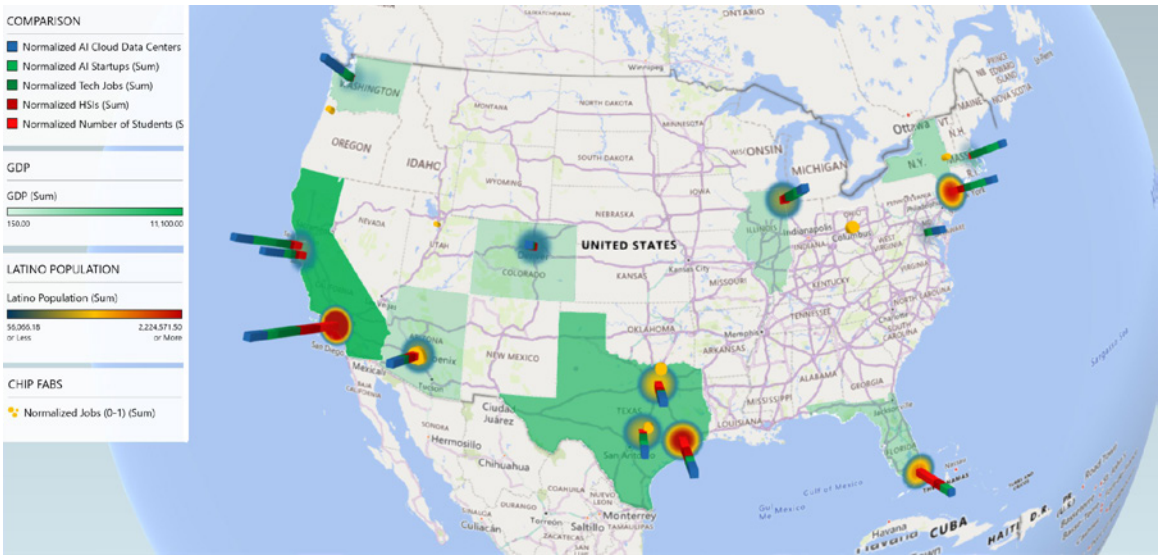


Figure 7: The Latino AI Opportunity Map
https://conectado.com/opportunitymap

There are 5 layers of the Latino AI Opportunity Map that were analyzed. There are significant commonalities that highlight the intersections and opportunities of the growing Latino demographic in the U.S. and AI technologies. Analyzing the findings, we can identify several commonalities that relate to Latino/Hispanic demographics:

Latino/Hispanic Demographics (Layer 1):
States with significant Latino populations include California, Texas, Florida, and New York. These states have vibrant Latino communities that contribute substantially to the local economy and culture.

AI Jobs and Infrastructure (Layer 2):
The same states, particularly California and Texas, are also hubs for jobs in AI applications and infrastructure. The high-tech industries in these states are thriving, providing numerous opportunities for employment in AI fields.

Data Centers (Layer 3):
States like Texas, Virginia, Central Valley, California, Arizona, New York and Nevada are key locations for Data Centers, Cloud Data Centers, and AI Data Centers. The data center supply under construction in these locations jumped by 70% from a year ago to a record 3.9 gigawatts according to CBRE Group.

Semiconductor Fabs (Layer 4):
The CHIPS and Science Act of 2022 has led to the construction of semiconductor fabs in states such as Arizona, Texas, New York and Ohio. These fabs are crucial to the production of semiconductors, which are essential for AI and other technologies, thus creating a significant number of jobs in these states.

Hispanic Serving Institutions (Layer 5):
There are 600 Hispanic Serving Institutions and 425 Emerging Hispanic Serving Institutions enrolling over 5.2 million students. States with a high number of Hispanic Serving Institutions (HSIs) include California, Texas, and Florida. These institutions play a critical role in educating and empowering Latino students preparing them for careers in AI and other high-tech fields. (Source: www.hacu.net)

California and Texas are repeatedly highlighted across multiple layers. These states, with the majority of their populations being Latino, have robust AI job markets, substantial investments in data centers and semiconductor fabs, and the largest numbers of Hispanic Serving Institutions. This confluence of factors positions California and Texas as pivotal regions where Latino demographics and technological advancements intersect.

Economic and Educational Empowerment: The data illustrates a strong link between regions with significant Latino populations and the availability of educational and economic opportunities in AI and technology sectors. This suggests a mutually reinforcing relationship where Latino communities can thrive and contribute to technological progress.

The intersection of Latino/Hispanic demographics with AI jobs, data centers, semiconductor fabs, and educational institutions underscores the critical role these communities play in the technological and economic landscape of the United States. By leveraging these opportunities, Latino communities can significantly contribute to and benefit from the ongoing technological revolution.

Promoting AI education, infrastructure investments, and employment opportunities in the states, as noted in section 4.3, will be crucial for leveraging the full potential of the Latino demographic in the evolving technological landscape. This alignment not only supports economic growth but also fosters a more inclusive tech industry.

LATINOS FUELING AI

The intersection of this technological revolution with the rising influence of the U.S. Latino demographic presents an extraordinary opportunity. Latinos are strategically positioned to be key players in the adoption of new technologies, and as this demographic deepens their engagement with AI, they can further seize this opportunity to shape an inclusive future for all.

3.1 Benchmarks

Case studies show that companies with a diverse workforce, including significant Latino representation, tend to outperform those without. This is particularly evident in innovation-driven industries like AI[9]. The following data explores the implications of greater Latino diversity in the AI sector and documents the impact of Latino entrepreneurship on the field at large.

3.2 Latino Representation in Leading NASDAQ Companies

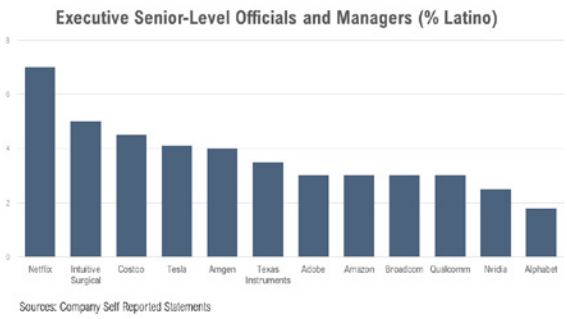
Producing within the AI Sector

This section presents an analysis of representation based on self-reported statements from the 30 largest NASDAQ companies by market capitalization at the time of writing. Due to the lack of standardization in reporting, we focus on the job positions most commonly reported. However, not every company reports workforce breakdowns for every role.

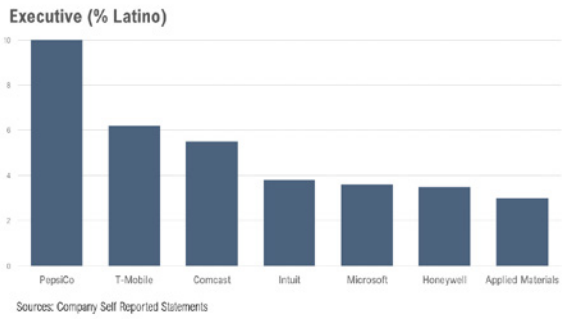
Across all the companies considered, we may find a lower representation of Latinos in senior roles, but **we do see an increase in Latino representation in more technical roles, meaning there are opportunities for advancement in this demographically youthful population.** For instance, at the executive senior level, Netflix has the highest Latino representation at 6.7%, while Alphabet has the lowest at 1.7%, with most companies reporting under 4%. In more junior executive roles, Pepsi employs nearly 10% Latinos, whereas Applied Materials employs only 3.1%.

Apple and Meta report only on "leadership roles," where Latinos are represented at 12% and 5.4%, respectively. In technical roles, Latino representation is considerably higher, led by Tesla with 28%, Qualcomm with 25%, and Costco with 24%. Interestingly, we find a higher share of Latinos in technical roles than in sales roles, as shown in subfigure E. Latinos also show strong representation in customer support, professional roles, and other non-technical roles.

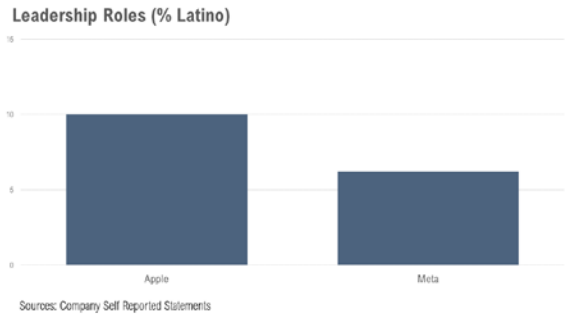
Representation of Latinos in the top 30 NASDAQ companies



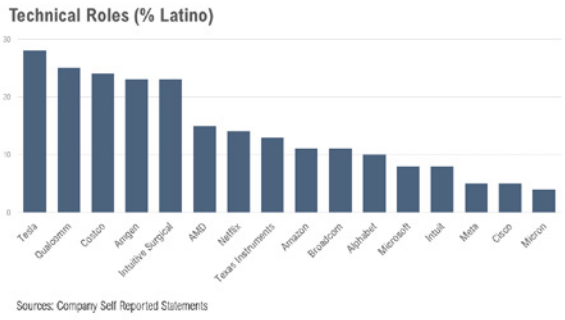
A: Executive senior-level officials and managers



B: Executive roles

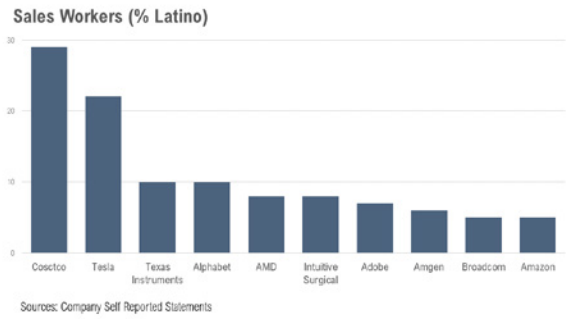


C: Leadership roles

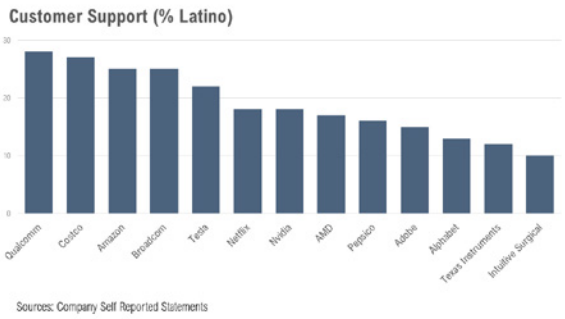


D: Technical roles

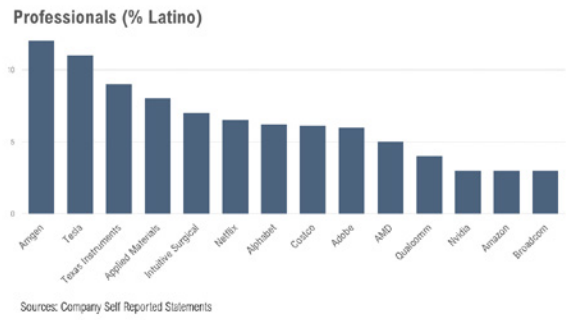
Representation of Latinos in the top 30 NASDAQ companies



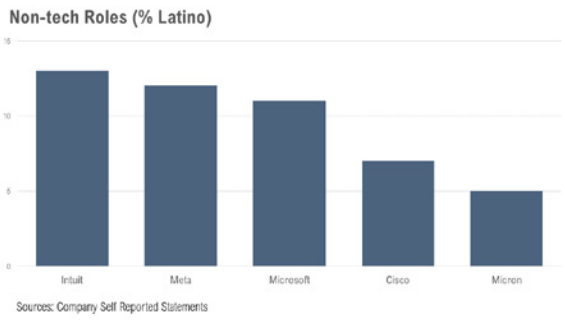
E: Sales roles



F: Customer Support



G: Professionals



H: Non-technical roles

The comparatively high share of Latinos working in technical roles is encouraging as some of these individuals may already have the technical skills to transition to leadership roles within AI, if provided with a strong foundation in managerial skills.

3.3 The Workforce in Numbers: Latinos in AI-Oriented Roles

The participation of Latinos in the AI workforce has been increasing at a faster rate than in the overall U.S. workforce. This trend is crucial for the development of a diverse and innovative AI industry. The AI revolution is shifting the U.S. workforce towards more tech-centric roles, with Latinos playing an increasingly significant role in this transition making up the highest percentage of the workforce.

The Center for Security and Emerging Technology[10] created a taxonomy of employment roles primarily based on an analysis of keywords found in Burning Glass, a job posting aggregator. Jobs were classified into four categories based on decreasing engagement with AI technologies:

1. Technical Team 1 (Tech 1): occupations that are or could be actively working in AI, needed to provide technical inputs into AI applications, or could laterally move into an AI **development role.**
2. Technical Team 2 (Tech 2): occupations that have the related knowledge, skills and abilities (KSAs) to perform technical roles on an AI team, either as is or with some minimal additional training.
3. Product Team: occupations that complement AI technical occupations in product development (such as project or product managers and legal compliance officers).
4. Commercial Team: occupations that provide support for the scaling operations, marketing, business development or acquisition of AI at the organizational level.

The authors subsequently linked the taxonomy of AI-connectedness to U.S. Census Bureau job classifications used in the 2018 American Community Survey to, among other goals, generate descriptive statistics of exposure to AI through employment by race and ethnicity.

In 2018, Latinos working in technical roles within AI made up less than 7.2% to 8.1% of Technical Team 1 and 2 categories. **Encouragingly, these trends have improved in recent years with Latinos making up 9.1% and 10% of those respective categories in 2022[11] (See Figure 8).** From 2018 to 2022, the representation of Hispanic workers in the U.S. AI workforce has seen a significant increase across all occupational categories. According to the data snapshot provided, the Hispanic share in the AI workforce grew notably, with some categories experiencing more than a 50% increase in Hispanic representation.

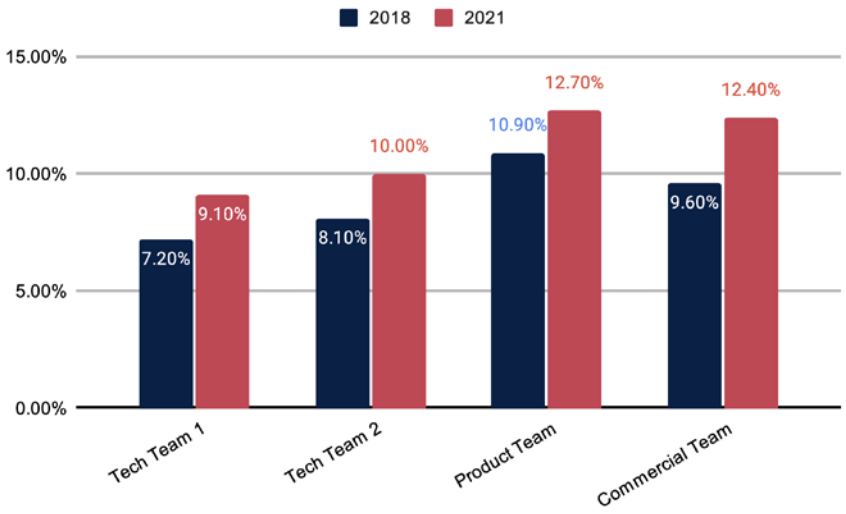


Figure 8 Growth of Latinos in AI Occupations

Adapted from: Rathinam, S. S. (2024). The U.S. AI workforce: Analyzing current supply and growth. Center for Security and Emerging Technology. https://cset.georgetown.edu/publication/the-u-s-ai-workforce-analyzing-current-supply-and-growth and Gehlhaus, D., & Mutis, S. (2021). The U.S. Ai Workforce. Center for Security and Emerging Technology. https://cset.georgetown.edu/publication/the-u-s-ai-workforce/

There is strong progress from this data, however, the share of Latinos occupying these roles still trails that of non-Hispanic Whites and Asian, only ahead of Black individual's share, and well below the Latino share of the U.S. population. Interestingly, CSET puts the number of individuals in technical roles 1 and 2 at 9.6 million, up from 7.7 million three years earlier, a 24.7% increase.

3.4 Sizable Shifts in Hispanic Representation

The increase in Hispanic representation in the AI workforce is higher than the 10% growth seen in the Hispanic share of the total U.S. workforce during this period. This trend highlights the gradual but significant inclusion of Hispanic workers in the AI industry, reflecting broader efforts to diversify the tech sector and the increasing opportunities for Hispanic professionals in AI-related roles. Figure 9 below represents the total percentage increase of all workers in AI occupations.

AI Occupation Category	2018 Employment	2022 Employment	Percent increase since 2018
Technical Team 1	4,759,087	5,985,734	25.8
Technical Team 2	3,006,583	3,623,711	20.5
Product Team	4,350,737	5,007,610	15.1
Commercial Team	1,908,344	2,424,271	27.0

Source: American Community Survey, 2022, CSET analysis

Figure 9: AI Occupation Employment Increase

2018 to 2022: The number of Hispanic employees in the **Commercial Team** increased by over 63%, the highest among all AI workforce categories. This reflects the growing involvement of Hispanic workers in roles that support the scaling, marketing, and acquisition of AI technologies. Technical Teams (1 and 2):

2018 to 2022: Both **Technical Team 1** and **Technical Team 2** respectively saw 58.7% and 48.7% in Hispanic representation. This increase suggests that more Hispanic workers are entering and contributing to technical roles within AI development and related fields.

2018 to 2022: **The Product Team** saw a 34% increase in Hispanic employees, which, while substantial, was lower compared to the other categories. However, this increase was still higher than the growth in Hispanic representation in the overall U.S. workforce during the same period.

AI Occupation Category	2018 Hispanic Employment	2022 Hispanic Employment	Percent increase since 2018
Technical Team 1	341,789	542,417	58.7
Technical Team 2	244,587	363,799	48.7
Product Team	472,102	635,251	34.6
Commercial Team	183,679	299,767	63.2
Total U.S. Workforce	27,540,315	30,505,289	10.8

Source: American Community Survey, 2022, CSET analysis

Figure 10: AI Occupation Hispanic Employment Increase in the U.S. Workforce

The shift underscores the importance of continuing to provide access to education and training in AI and related fields to ensure that this positive trend continues, and that the AI workforce becomes increasingly reflective of the broader U.S. population (See Figure 10).

While the shifts are promising, Latinos are still under-represented in roles that require using AI, particularly in roles that rely heavily on this technology. Investing in Latino AI jobs training in states identified in section 2 with high AI and computer science related jobs, semiconductor fabs, and data centers through Hispanic serving institutions will help to close this gap.

EDUCATIONAL ATTAINMENT

Section 3 highlighted that Latinos remain underrepresented in the AI industry relative to their share of the U.S. population, even though significant progress has been made over the past decade. Section 4 delves into the progress and remaining gaps in educational attainment in AI-related fields. Our findings show that Latinos have made substantial strides in closing gaps in STEM and computer science. Notably, publicly available data indicates that degree completion rates are a strong predictor of employment in AI industries, with job figures typically lagging behind educational attainment by about five years. Additionally, the percentage of STEM degrees awarded to Latinos in postsecondary institutions is about 3% higher than the percentage of Latinos working in technical roles within the AI industry: 11.2% vs. 7.2-8.1% in 2018, and 13.5% vs. 9.1-10% in 2022. This data suggests that education is a crucial driver in enhancing Latino representation in AI.

4.1 Advancing Educational Attainment: Latinos Gaining Ground in AI-Related Degrees

Broad trends among Latinos in STEM & Computer Science (CS)

Since the National Center for Education Statistics (NCES) does not collect data specifically on AI through its Integrated Postsecondary Education Data System (IPEDS), we analyze data from STEM fields as the closest proxy in this section (science, technology, engineering, and math) to examine fall enrollment and awarded degrees.[12] Separately, we present CS-specific data from IPEDS Completions Survey from the Department of Education. All relevant tables can be found in the appendix.

Figure 11 and Table 1 in the appendix presents the number and percentage of STEM degrees awarded by postsecondary institutions by race and ethnicity from 2012-2013 through 2021-2022. Notably, Hispanics are underrepresented in STEM throughout this period. For example, by 2021-2022, Latinos comprised approximately 19% of the U.S. population but received only 13.5% of STEM degrees. However, there are great signs of progress: Latinos increased their share of these degrees from 9.2% in 2012-2013 to 13.5% by 2021-2022. Conversely, the Black population's share declined from 8.3% to 7.7%, and the White population's share decreased from 58.8% to 48.8%. Female representation in STEM has also improved significantly among Hispanics. From 2012-2013 to 2021-2022, the percentage of Hispanic females receiving STEM degrees increased from 30.1% to 36.7%. In 2021-2022, nearly 40,000 Latinas obtained a STEM degree (See Appendix Table 2).

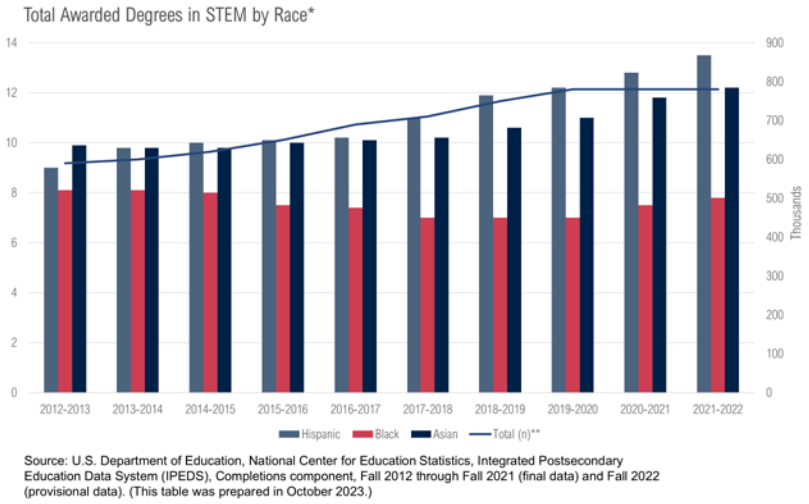


Figure 11: Total Awarded Degrees in STEM by race and ethnicity

The progress of Latinos in obtaining STEM degrees has been particularly notable at the associate's degree level, where their representation increased from 13.4% to 21.2%. Despite a contraction in the total number of STEM associate's degrees awarded (from 88,800 to 84,856 during the study period), the number of degrees awarded to Latinos rose from 11,867 to 18,024 (See Appendix Table 3). Females also made significant gains, with their share of Hispanic STEM associate's degrees increasing from 23.7% to 34%.

Regarding bachelor's degrees in STEM fields, the percentage of degrees awarded to Hispanics increased from 8.4% in 2012-2013 to 13.6% by 2021-2022 (Table 5 and Figure 12). Hispanic females also made notable strides, increasing their representation among Hispanic STEM bachelor's degree recipients from 36.8% to 41.2% (Table 6). However, gaps remain at more advanced educational levels. In 2021-2022, only 7.3% of master's degrees in STEM were awarded to Latinos, even though it is up from 4.5% in 2012-2013 (Table 7). During this period, the percentage of Hispanic females receiving STEM master's degrees increased from 31.3% to 38.7% (Table 8). A similar trend is observed for STEM PhDs, with Hispanics making up 5% of recipients in 2021-2022, compared to 3.3% in 2012-2013 (Table 9).

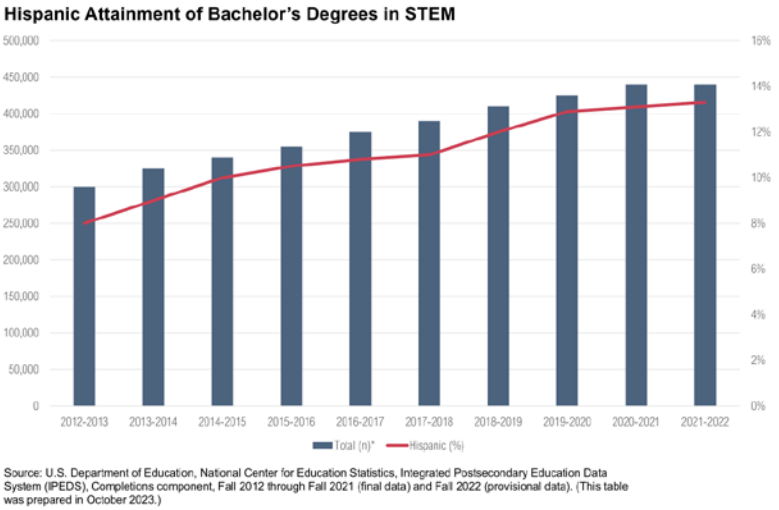


Figure 12: Total Awarded Degrees in STEM by race and ethnicity
Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Completions component, Fall 2012 through Fall 2021 (final data) and Fall 2022 (provisional data). Appendix Table 5 was prepared in October 2023.

Progress in Computer Science has been even more impressive, Latinos were awarded 21,700 CS degrees in 2022 (14.7% of total) from 7,800 in 2011 (9.5% of total). This corresponds to a 180% growth rate that is only surpassed by Asian individuals at 329.5% (Table 11). Encouragingly, this growth has been especially noticeable in more advanced degrees: the number of Hispanics with a PhD in CS increased by 252.6%; those with master's in the same discipline, by 314.4%; while Hispanics with a bachelor's degree in CS surged by 268.5%. These growth rates are far higher than national trends which are 33.7%, 171.1%, and 142.5% for PhD, master's, and bachelor's degrees, respectively. As a result, the share of Latinos holding these advanced degrees has increased between 2011 and 2022 (Table 12).

Latinos have made significant progress in increasing their share of STEM and computer science (CS) degrees between 2012 and 2021. According to the latest estimates from NCES, Latinos now account for 13.5% of STEM degree recipients, up from 9.2% in 2012. In CS, their share has also grown substantially, reaching 14.7%, a 5.2 percentage point increase. However, despite these gains, Latinos remain underrepresented in these fields relative to their share of the U.S. population. Since the proportion of Latinos working in AI appears to follow their share of STEM and CS degree recipients, it is clear that increasing the number of Latino graduates is crucial for reducing their underrepresentation in the AI industry.

4.2 A Career in AI: A Path to Socio-Economic Progress & Wealth Accumulation

The Pathway to Wealth Creation in AI and Technology for the Latino Community

As the United States rapidly embraces advancements in AI, the Latino community's shift from traditional to non-traditional workforce sectors opens up transformative opportunities in AI and other technologies, offering a new pathway to wealth creation. Building on the legacy of previous generations who contributed to what is now recognized as the 5th largest economy in the world, today's Latino generation stands poised to leverage AI and technology to drive not just economic growth but generational wealth. As Ana Valdez, CEO or the Latino Donor Collaborative eloquently states, "If the Latino parents created the 5th largest economy, imagine what their kids will do."™

Historically, the Latino demographic in the United States has been heavily concentrated in service occupations, with 33% of low-wage workers identifying as Latino—40% of whom are women and 28% men. This economic reality, while challenging, underscores a significant opportunity transitioning Latino workers into higher-wage occupations, particularly in AI and technology, could dramatically alter the economic trajectory of the community.

The financial potential of this shift is substantial. For instance, the starting salary for an AI engineer with 0-1 years of experience is approximately $100,324 or $48 per hour. This income is nearly three times that of many low-wage positions. The financial uplift from such a transition is not just about individual income; it's about creating a robust economic base for future generations. As Latinos move into these higher-paying roles, the economic contribution of the Latino workforce to the U.S. GDP would increase significantly, further fueling national growth.

The impact is even more pronounced when considering specific AI-related occupations:

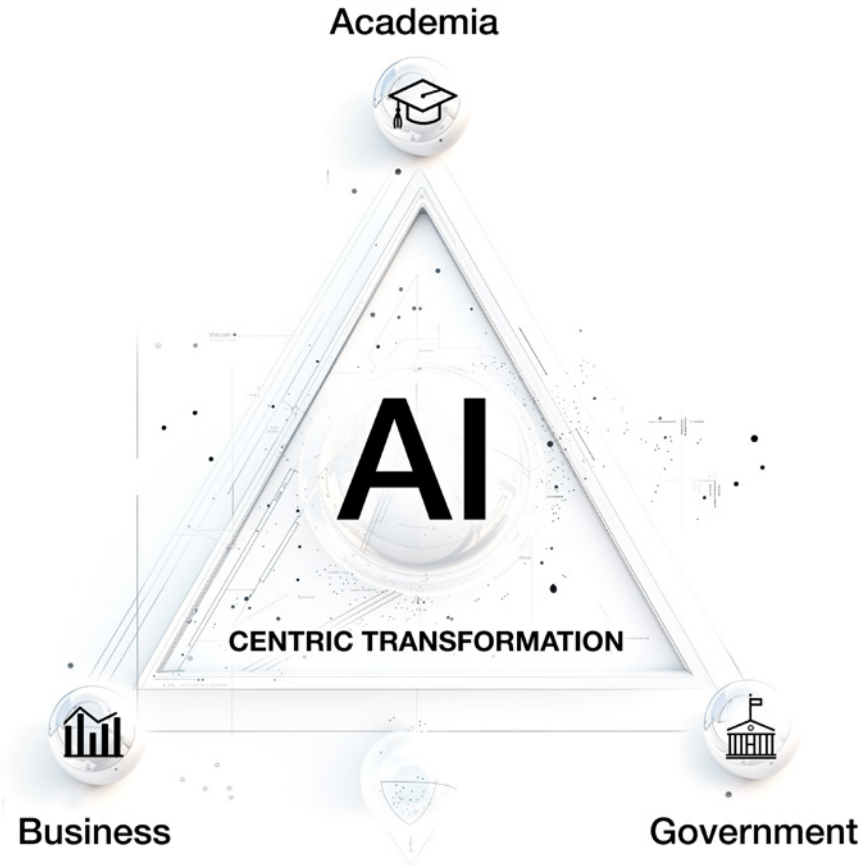
- **Data Scientist Salary Growth:** Starting at $107,150, with potential growth to $134,922 over 10-14 years of experience.
- **AI Engineer Salary Growth:** Starting at $100,324, with potential growth to $132,496 over 10-14 years.
- **Machine Learning Engineer Salary Growth:** Starting at $105,418, with potential growth to $135,388 over 10-14 years

These occupations are not only high-paying but also in high demand, with the U.S. Bureau of Labor Statistics projecting a 23% growth in jobs for "computer and information research scientists" from 2022 to 2032, far outpacing the average growth rate across all occupations. As more Latinos continue to work in high-paying AI-related roles, their compensation is expected to grow, which will positively impact intergenerational wealth creation and an improvement in opportunities for the next generation. In this view, the convergence in AI roles demonstrated by Latinos will not only improve the industry's productivity but will also act as a catalyst for increased socio-economic mobility.

ALIGNMENT AS A SOLUTION TO LATINO UNDERREPRESENTATION IN AI

5.1 The Importance of Organizational Alignment of Business, Academia, and Government

The rapid increase in demand for AI-proficient workers makes it imperative for business, academia, and government to collaborate effectively to train new cohorts in the use of the technology and retain U.S. leadership in the field. Latinos, who make up an increasingly larger share of the U.S. workforce, are a key component of these efforts. Although there has been measurable increases in the number of Latinos in AI occupations and related educational attainment in STEM, Computer and Information Sciences, representation is still insufficient. To address this imbalance, new academic curricula, focused on skill development for an AI-centric future and supported by government policy as well as academic collaborations with industry leaders, is essential.



Examining the role of H-1B visas in technology related job placement provides insight into the imperative for alignment across sectors to ensure Latinos are represented in AI. In the fiscal year 2024, the United States issued 85,000 H-1B visas, including 65,000 under the regular cap and 20,000 under the advanced degree exemption (master's cap). Technology based hiring dominates the majority of these visas at approximately 50% and education work related visas make up 16%. Regarding demographics, a significant majority of H-1B visa recipients are from India, followed by China. For instance, in past years, Indians have consistently received around 70% of the H-1B visas. The next largest group is Chinese nationals, followed by smaller percentages from countries like Canada and South Korea. The gender distribution among H-1B visa holders generally shows a higher percentage of males compared to females. Businesses and organizations need to adapt their recruitment and retention practices for AI and technology talent versus continual offshoring or traditional H1B hiring. Government grants to underrepresented populations seeking upskilling in technology related fields and AI academic focused curriculum and extracurricular learning programs in technology will help ensure Latinos are competing with high-skilled candidates from overseas.

Source: U.S Immigration and Citizen Services (www.uscis.gov) and the American Immigration Lawyers Association (www.aila.org).

5.2 Academic Initiatives: University Programs, Training Systems, & Non-Traditional Learning Programs

Academic programs play a vital role in the development, skills training, and future of our workforce. These programs are foundational to AI technologies that are impacting our workforce and, thus, our economy. While AI specific curriculum and professional programs in many universities and community colleges are working to meet this demand, our current educational system still needs updating to keep pace with an AI-centric world.

In 2022, only forty-six Hispanic-serving institutions of higher education offered AI-centric programs and only thirty-nine of those awarded degrees in computer science with an emphasis in AI, according to the Hispanic Association of Colleges and Universities (HACU). Although these AI degree programs are just beginning to be introduced in higher education institutions, available data points suggest that Latinos are underrepresented. Graduates of these programs include 49.3% U.S. Nonresident students, followed by 21% White students, 16% Asian students with Latino students making up only an approximate 5% of total graduates, or 10% of U.S. residents and citizens (See Figure 13).

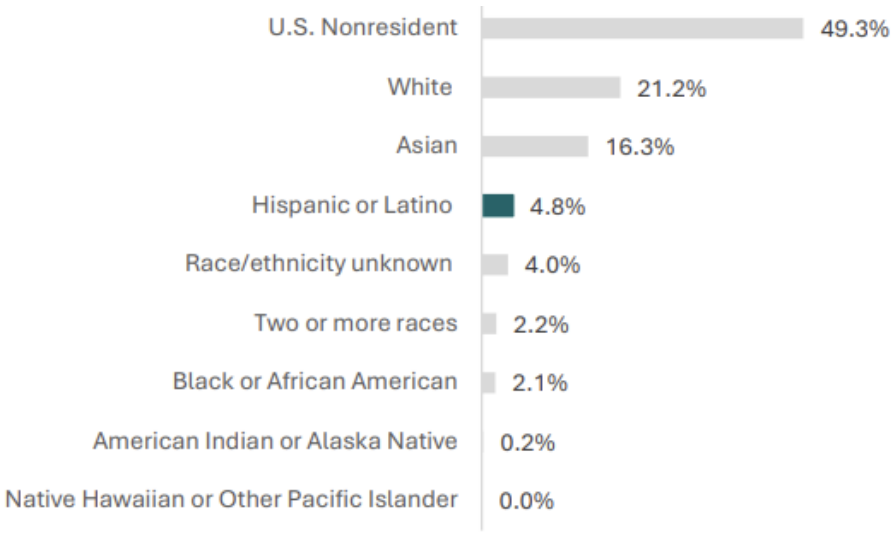


Figure 13: Percentage of graduates of AI influenced programs.
Source: Hispanic Association of Colleges and Universities (HACU)

Other universities like Stanford, Massachusetts Institute of Technology (MIT), and Arizona State University offer specialized professional AI development programs outside of their traditional curriculum. Among these offerings are machine learning courses online, which can provide deeper insights and advanced skills in AI technologies. As this trend develops, collaboration with business and industry for upskilling and reskilling students will be essential to align the curriculum with real-world industry needs.

The following are academic organizations focused on educational and professional development within specific fields.

- **CAHSI** (Computing Alliance of Hispanic-Serving Institutions) - With approximately 1,200+ members, this organization focuses on academic and professional development for Hispanic students and professionals in computing.
- **ASU** AI upskilling portfolio - This is a new ASU initiative aimed at ensuring ASU's 64,000+ students have the necessary skill sets in AI to lead in their respective fields. New AI curriculum include: AI Foundations, AI in Healthcare, Ai in Education and the Public Sector, AI in Finance, AI in Business and Leadership, AI in Sustainability.[13]
- **Kapor Foundation** - Operates at the intersection of racial equity and technology offering inclusive pathways in tech and advancing policy to drive systemic change.

The following career organizations provide support and resources for professionals in various industries.

- **Hispanic Heritage Foundation** - Focuses on education, workforce, social impact, and culture through the lens of leadership
- **Society of Hispanic Professional Engineers (SHPE)** - Boasting approximately 25,000 members, SHPE focuses on broad tech and engineering fields, including AI.
- **Association of Latino Professionals For America** - With approximately 97,000 members, designed to empower, connect and equip Latino to resources for professional success.
- **Techqueria** - With approximately 15,000+ members, this organization caters to Latino professionals in tech, emphasizing AI and data science.
- **Latinas in Tech** - Approximately 10,000+ members strong, this organization supports women in tech, particularly those in AI and machine learning.
- **Hispanic IT Executive Council (HITEC)** - With around 3,000+ members, HITEC works towards Hispanic representation in IT and tech leadership roles.
- **LatinX in AI (LXAI)** - With a membership of approximately 2,000+, LXAI focuses on promoting Latino representation in AI.
- **Latinos in Tech** - With about 1,500+ members, they are dedicated to increasing Latino representation in the tech industry, including AI and machine learning.

In addition to top-down approaches, such as university overhaul of curriculum and industry consortiums, other, bottom-up approaches have proven effective. Bootcamps, online learning platforms, hackathons, and industry certifications and badges all aid in the support of Latinos entering the AI workforce and have historically led to increases in salaries.

Coding and career development bootcamps have emerged as a beacon of hope for individuals seeking to fast-track their tech careers while juggling full time jobs. Graduates of coding bootcamps reported significant salary increases after completing their programs[14], highlighting the economic empowerment and upward mobility potential for Latino participants in the tech sector, where AI literacy and advanced skills are in high demand.

Online learning platforms such as Coursera and Subject, led by Latino founders Felix Ruano and Michael Vilardo, have democratized access to tech education and have seen a substantial increase in enrollments for AI-related courses over the past two years. Among Latino learners, this surge in interest signals a growing appetite for knowledge and skills

development in cutting-edge technologies, Platforms such as Microsoft's Reading Coach offer personalized reading coaching to enhance literacy crucial for success in technical roles. Leveraging such technology through tailored learning journeys can equip individuals with the skills to decode complex AI terminology, providing real-time feedback and diverse reading materials to build a solid foundation of tech literacy.

Hackathons and coding competitions such as the NASA International Space Apps Challenge which focuses on STEM solution development strategies have proven to be fertile grounds for talent cultivation within the aerospace sector, with participants showing a higher likelihood of pursuing a career in tech. For young Latino innovators, these collaborative platforms foster creativity and teamwork, providing a springboard for honing their AI skills and making a mark in the industry.

Industry certifications and badges have become a hallmark of expertise in the tech realm, with professionals holding certifications earning higher salaries on average. By obtaining recognized credentials in AI and related fields, Latinos can enhance their marketability and competitiveness in a rapidly evolving job market. For nontraditional learners seeking to enter the AI industry, building a robust portfolio of projects and practical experience is essential. Programs such as MIT's AI 101 opencourseware curriculum offer hands-on assignments and projects that allow learners to apply theoretical concepts to real-world problems. By completing these projects and showcasing their work in a portfolio, nontraditional Latino learners have opportunities to demonstrate their proficiency in AI to potential employers, highlighting their creativity, problem-solving skills, and technical expertise.

Internships and apprenticeships such as those provided by NASA’s Office of STEM Engagement (OSTEM) offer invaluable hands-on experience and mentorship opportunities, with participants reporting that such programs helped them build a professional network. For aspiring Latino tech professionals, these paid internship experiences provide a gateway to real-world AI applications and foster a sense of belonging and community within the industry.

Immersive technologies such as virtual reality and augmented reality are also being used in unique educational initiatives, such as introducing high-school age Latinos to advanced concepts like semiconductor fabrication and aerospace hardware integration. These types of experiences provide novel and exciting opportunities to interact with expensive and potentially dangerous hardware which may not otherwise be accessible to these students.

In the evolving landscape of the tech industry, the quest for proficiency in AI and emerging technologies has taken on new dimensions, offering a wealth of innovative pathways for skills development. For the next generation of Latino innovators, these transformative

approaches not only open doors to opportunity but also pave the way for meaningful impact and success in the digital age. By harnessing these pathways to success, aspiring Latino technology users and developers can chart a course towards a future defined by creativity, opportunity, and impact, shaping the landscape for generations to come.

5.3 Government

The U.S. Government plays a key role in advancing the skill and training that will create a workforce to maintain Latino leadership as an economic and technology powerhouse. Most recently, The Department of Commerce's National Telecommunications and Information Administration (NTIA) announced $1 billion in funding to ensure that growing communities have access to skills and devices to fully participate in the digital and AI era.

Advocating for policies that incentivize innovation and market expansion is essential for driving growth in the AI and technology sectors. Over the last 25 years, various industries have benefited from policies such as research and development (R&D) tax credits, which have encouraged companies to invest in innovation, notably in the biotechnology industry that has seen a surge in the development of new drugs and medical technologies. These policies have incentivized companies to take risks in research and experimentation, leading to groundbreaking discoveries and market expansion.

Additionally, government initiatives like public-private partnerships have played a crucial role in fostering innovation and industry transformation. The renewable energy sector, for instance, has thrived with the help of government subsidies and grants to promote the development of clean energy technologies. By collaborating with industry leaders and startups, these policies have driven market disruption and accelerated the adoption of sustainable energy solutions. Advocating for similar policies in the AI and technology industries can create a supportive ecosystem that empowers entrepreneurs, fosters creativity, and spurs market growth.

The current White House administration is actively working to ensure equitable benefits for Latino communities through strategic partnerships between Hispanic-serving institutions (HSIs) and semiconductor companies. These collaborations aim to address industry workforce needs by increasing investments in education, apprenticeships, and job training programs. For instance, Maricopa Community Colleges in Arizona, in partnership with Intel and Taiwan Semiconductor Manufacturing Company (TSMC), have launched a Semiconductor Technician Quick Start program to train students for careers in the semiconductor industry. These partnerships are crucial for establishing a robust school-to-career pipeline for Latinos, who historically face barriers to training and career opportunities in the technology sector. By fostering such collaborations, communities with large Latino populations are not only benefiting from new semiconductor job opportunities but also experiencing growth in union membership, small businesses, and overall economic activity.

Creating an AI research community that resembles the demographics of the U.S. is the goal of new NSF awards including funding seven innovative projects aimed at enhancing AI research and education at Hispanic-serving institutions and historically Black colleges and universities. Based on the data available from the National Center for Education Statistics (NCES), here are the approximate percentages of Latino enrollment at each of the listed schools who received NSF awards through the Expanding AI Innovation through Capacity Building and Partnerships program.

Note that these figures are approximate and based on the most recent available data from the NCES.

Schools listed by percentage of Latino enrollment:

- **Texas A&M International University (TAMIU):** Approximately 91%
- **San Diego State University (SDSU):** About 31%
- **Arizona State University (ASU):** Around 25%
- **Savannah State University (SSU):** Approximately 22%
- **Clark Atlanta University (CAU):** About 15%
- **Bowie State University (BSU):** Approximately 12%
- **Alabama A&M University (AAMU):** About 9%

The NSF's "Expanding AI Innovation through Capacity Building and Partnerships" program (ExpandAI) has been awarded to several universities with large Latino communities. One of the seven universities the NSF singled out in their press release announcing the award was Arizona State University which received nearly $3 million dollars. Chemical engineering professor Daniel Rivera, who has significant expertise in using mobile wearable devices for behavioral interventions to increase physical activity, will now see the expansion of his current research efforts. He stated, "Now I have the opportunity to study AI paradigms such as reinforcement learning as a tool for personalizing and improving behavioral medicine interventions in communities of color." Rivera believes the funding will allow him to dramatically improve what he has done before in other research settings using control systems engineering. He also says, "This will be a gamechanger for not just my work, but also for the type of research and education possibilities for my students."

Leveraging the existing AI capacity at ASU, the prior collaboration of ASU researchers, and new partnership with the AI Institute for Foundations of Machine Learning (IFML), will allow for new interdisciplinary opportunities with the recently founded ASU School of Medicine and Advanced Medical Engineering. Professor Hassan Ghasemzadeh, Rivera's colleague who led the grant request to the NSF, points out the work's cascading effect has just begun. "The goal is to develop new certificates, integrate findings on AI and health into our teachings and develop new courses." This collaboration also features ExpandAI workshops, and the development of certificates and course modules in pervasive AI systems to increase access to AI education and career pathways for minority students. Professor Ghasemzadeh says, "We intend the grant to not only impact our graduate and undergraduate students, but also at the secondary school level by delivering instructional materials for use by both high school teachers and students."

5.4 Case Study: Leadership Spotlight Soribel Felix

Soribel Feliz is a thought leader in Responsible AI and AI governance. She started her career as a U.S. diplomat with the Department of State. She also worked for Big Tech companies, Meta and Microsoft, and most recently, as a Senior AI and Tech Policy Advisor in the U.S. Senate and is now an AI product manager in the federal government.

How can education policy strengthen pathways to careers in tech and AI?

Exposing kids to technology early on is key, starting with digital literacy and ensuring Latino students have access to and training in digital technologies and a solid STEM curriculum. Moreover, in the absence of equitable funding for public schools, we need to increase access to quality elementary and higher education through targeted financial support that can help more Latino students be exposed to and pursue advanced degrees in STEM careers. Community colleges can also have a role in creating more AI and tech specific programs.

How can government funding support these efforts through post-secondary levels?

Government can provide direct funding to students through need-based grants and scholarships, as well as incentivize STEM careers by providing STEM-specific scholarships or tuition waivers. Public universities could provide research grants to fund projects in AI. Moreover, the government can provide workforce development grants to support short training bootcamps and apprenticeships to develop specific tech and AI skills.

Leadership Spotlight: Soribel Felix

Lastly, providing financial support for incubators and accelerators that focus on AI and tech startups would encourage students to take more risks and embrace entrepreneurship.

What are some other routes to expanding preparedness in AI fields?

Thanks to technology, college is no longer the only way to pursue high-paying jobs and skills-based programs may be one way to encourage on-the-job training opportunities. In addition, there is a wealth of free or low-cost resources and full educational courses that can prepare young people for careers in technology. Bootcamps and alternative education programs, including courses that can be taken through online platforms such as Youtube, may be a better choice for others.

What is the role of businesses in expanding Latino talent in the AI and tech space?

Companies can also contribute to greater participation of Latinos in the AI space through skills-based hiring. Big tech companies like Google, IBM and Accenture no longer require applicants for certain jobs to have college degrees, prioritizing skills-based hiring instead. This move has significantly lowered the barrier to entry for Latinos and other marginalized communities that cannot afford four years of college. That is good news and a cause for celebration.

How can businesses, government and educational institutions work more closely in these efforts?

The United States can encourage innovation and entrepreneurship by providing funding and resources for startups that champion diverse founders and minority-owned small businesses, which can create new job opportunities.

Meanwhile, businesses and educational institutions should develop industry-led curricula that align with industry needs and trends while offering students greater insight into the short-term and long-term salary potential of these career paths. That way, students can have a better understanding of how their academic investments may pay off. Also, universities should provide students with hands-on experience and expose them to industry challenges and opportunities.

Finally, both universities and businesses should forge mentorship programs that pair industry professionals with students to provide guidance and career advice. These approaches not only open doors to opportunity but also pave the way for meaningful impact and success in the digital age. By harnessing these pathways to success, aspiring Latino technology users and developers can chart a course towards a future defined by creativity, opportunity, and impact, shaping the landscape for generations to come.

5.5 Business

With the largest AI companies based in locations with deep Latino populations, businesses can tap into local talent. As referenced in section 3.2, businesses are seeing an increase in Latino representation in technical roles. In order to help Latinos advance in the technology sector, businesses are creating initiatives that seek to mentor, fund, train and upskill Latinos interested in tech and AI. Industry leaders are working to address supply shortfalls of AI-trained workers.

An important effort to keep up with the demand for technical roles include the Information and Communications Technology consortium. This group is made up of nine major technology firms aimed at developing pathways for workers to upskill in digital literacy and AI for technology-oriented jobs. The companies include Cisco, Microsoft, Google, Indeed, Eightfold.ai, IBM Intel, Indeed and SAP. According to the AI-enabled ICT workforce consortium report, all of these companies intend to train millions of people in digital skills by 2032 (See Figure 14)

- **IBM** - training 30 million workers in digital skills including 2 million workers in specific AI technologies
- **Cisco** - instructing 25 million workers in digital skills and cybersecurity
- **Google** - investing $130 million in AI training for people across Europe, Africa, Latin America, APAC and the US
- **Microsoft** - surpassed its goal of training 10 million workers in digital skills by 2025
- **Intel** - upskilling 30 million workers in AI technology skills
- **SAP** - training 2 million people in digital skills worldwide[15]

As evidenced by the 97 million plus workers this consortium will be impacting by 2032, these technology firms intend to prepare millions in the workforce for a world where AI will influence every job and occupation. While Latinos are part of this workforce being trained by the consortium, further focus on professional networking, advocacy, hiring practices and retention programs by Latino specific professional groups is key to ensuring Latinos continue to advance in their careers.

Figure 14: Adapted from: Cisco. (n.d.). AI-enabled ICT workforce consortium report. Cisco. https://www.cisco.com/c/dam/m/ai-enabled-ict-workforce-consortium/report.pdf

Innovative Latino leaders in the entertainment industry are also finding multiple ways to integrate AI into their workflows. Jeff Valdez, award-winning writer, producer, director and partner in New Cadence Productions, says, “We embrace AI for everything from cutting an original written treatment into a succinct log line all the way to creating sample posters for sales decks. We also use AI to see what a particular cast member would look like in a certain wardrobe or a period piece.” He notes that pre-AI, the time and cost to produce high level creative samples for pitches used to be prohibitive but that has changed dramatically. His company now regularly works with production designers and lighting directors that are using AI to create storyboards and set and lighting designs so they can more quickly execute physical builds while minimizing costly mistakes.

JC Leon, whose company Puppetier uses AI for special effects that use digital data to animate characters for both films and games, is finding his tools are being streamlined through the new AI data sets. He says, “I use AI to solve issues in hours that normally would be hard to accomplish in days. The simplicity of the integration of the AI process allows for more creativity to blossom in production because you don’t have to focus as much on forcing the technology to do what you want it to do.”

Valdez also dismisses the fears of job elimination in Hollywood, saying, "I have been a bit surprised at Hollywood’s old guard reluctance to embrace AI. To quote my long-deceased grandfather, 'You’re either on the train or in front of it.’"

The following businesses and initiatives seek to empower Latinos in technology, science and AI, effectively lowering barriers to entry in the field of AI at large. This is not a comprehensive list, but rather intended to show some examples of how professional business groups are empowering Latinos in the field.

- **TechLatino** provides professional development for Latinos looking to enter the field through mentorship, training, and access to Latino leaders in the field.
- **Accel.AI** helps underrepresented groups, including Latinos, gain access to tools in AI and engineering through workshops, consulting, and research.
- **Hola Metaverso** creates educational and networking event experiences that connect and inspire tech communities across the U.S. and LATAM in AI and emerging web technologies.
- **Project Include** seeks to promote diversity and inclusion in technology by working with companies to implement inclusive practices throughout the business from hiring practices, cultural inclusion, code of conduct, training and more.

- **Outreach** uses AI to streamline workflows. Cofounder Manny Medina does not require citizen questions in the hiring process to encourage immigrant candidates to apply.
- **Latinx in AI (LXAI)**'s mission seeks to empower Latinos working in AI through research, mentoring, and development.
- **Latino Founders Fund** by Google supports Latino startups seeking to use AI as an integral part of their business platform through cash awards of $150,000 per startup while also providing technical training and mentorship.
- **Latinas in Tech** connects, supports, and empowers Latina women working in technology. It provides networking opportunities, career development resources, and mentorship programs to help them succeed in the tech industry.
- **Code2040** is a Black-led organization promoting equity in the innovation economy. Serves Black and Latinx people.
- **Hispanic IT Executive Council (HITEC)** serves Hispanic Technology Professionals to become leaders into executive level roles through leadership development programs, educational programming, and mentoring.
- **LatinoTech** is a platform for exchanging information, generating dialog, and promoting greater inclusion.
- **Techqueria** empowers and supports Latine professionals to succeed in the tech industry. Provides career mentorship, development seminars, and networking opportunities to members.
- **Hispanic Executive** focuses on amplifying stories of Latino leadership.
- **Latino Leaders Magazine** showcases the enduring influence and achievements of the Latino community.
- **Latinx in Tech Program by UnidosUS** in partnership with Google provides participants with training to earn a Google Career Certificate. The program focuses on practical skills applicable to the tech industry.
- **Latinx Who Code** is a virtual community for Latinxs in tech that provides education, advocacy, and support to help Latinxs get jobs in the tech industry.

5.7 The Significance of Organizational Adaptation in Addressing Historical Bias

The Importance of Diverse Hiring Panels: Lessons from Latinas in Tech

Diverse hiring panels play a crucial role in mitigating bias and improving recruitment outcomes. They bring a variety of perspectives to the hiring process, helping to identify and counteract unconscious biases. An illustrative example comes from Latinas in Tech, an organization that promotes the inclusion of Latina women in STEM fields. “In the span of one year, a sponsor company partnered with Latinas in Tech successfully hired 25 Latina members, largely due to the efforts of a Latina recruiter,” says Ana Bretschneider, Director of Business Development. In contrast, other companies hired only one or two Latinas, underscoring the significant impact of having recruiters who understand how Latinas may understate their achievements on their resumes.

Recruiters who share similar backgrounds with candidates can better recognize potential and encourage applicants to present their true credentials. They can also help candidates overcome cultural barriers that might hinder their progress, such as reluctance to self-promote or challenge authority. Diverse panels are more likely to appreciate diverse experiences and skills, broadening the scope of evaluation beyond conventional metrics.

One significant factor contributing to job discrimination is the emphasis on "cultural fit" in hiring practices. Cultural fit is often defined as the likelihood that a candidate will adapt to an organization's core values and collective behaviors. However, this criterion can perpetuate bias, allowing employers to favor candidates who resemble existing employees, thereby discriminating against minorities, including Latinos. Cultural fit is frequently considered more important than other factors, such as educational background or GPA, and is topped only by previous job experience. The problem is that cultural fit often involves subjective judgments that can favor white candidates perceived as "more articulate" or "more collegial," regardless of their actual qualifications[16].

This bias is exacerbated by the use of machine learning algorithms that treat cultural fit as a strict rule. These algorithms can inadvertently reinforce stereotypes, as seen in scenarios where hiring algorithms prioritize candidates with specific characteristics that have no real bearing on job performance[17].

In response to the limitations of cultural fit, some companies have shifted to a "values fit" approach, which has yielded promising results. Unlike cultural fit, which focuses on conformity, values fit emphasizes shared principles and goals, allowing for greater diversity. Atlassian, a tech company that adopted this approach, carefully selects interviewers and trains them on structured interviewing and unconscious bias. The interview process includes behavioral questions designed to assess whether a candidate would thrive in an environment aligned with the company's values.

This shift to values fit has led to positive outcomes for Atlassian. In 2015, women made up only 10% of their technical workforce. By 2016, 17% of recent hires were women, and women held 14% of all technical roles. Similarly, the percentage of employees identifying as people of color increased from 23% to 32% among new hires[18].

5.8 Cultural Challenges for Latinos: Cautionary Tales and Solutions

Latinos, particularly young women, often face cultural challenges that discourage assertiveness and self-promotion. Many have been taught to be modest and not "rock the boat," which can hold them back in competitive fields like technology. Mentors play a crucial role in helping these individuals recognize their value and pursue career advancement opportunities. For instance, at the Latinas in Tech event, some overqualified women were applying for low-level internships due to cultural conditioning that can make young women uncomfortable in “singing their own praises.” Mentors can guide these women in accurately representing their qualifications and encourage them to aim higher.

The cultural expectation to remain loyal to one's current employer can also hinder career advancement. Latinas in Tech executives also say they have seen young women feel pressured to stay in their jobs out of a sense of obligation, even when better opportunities arise. Mentors can help them navigate these cultural expectations, offering support and encouragement to pursue positions that align with their skills and aspirations. By fostering a sense of confidence and self-worth, mentors can empower Latinos to overcome cultural barriers and achieve their full potential.

5.9 Case Study: Leadership Spotlight Jesse Martinez

Jesse Martinez, a World Economic Forum 2020 Delegate, is the Founder + CEO of LSA Global/ Latinx Startup Alliance, a social impact non-profit supporting the Latinx tech ecosystem. A founder of five startups, including invincible, he is a founding investment partner at Resolved Ventures and a venture partner at VamosVentures, a $50M fund focused on U.S. Latino-led and diverse startups.

Why is Latino entrepreneurship critical to advancing opportunities in the AI space?

Diversity of thought and perspective are essential in developing the next generation of AI solutions and services. As Latino founders, we have a unique advantage to bring such solutions and services to market given we see the world and its challenges through different lenses to support new markets, support diverse cultures, and drive global innovation.

How did you get connected to the tech startup world?

I got my start during the dot.com era, after transitioning from engineering to tech sales. I was hired as employee #27 for a Silicon Valley startup that was funded by Sequoia Capital. It became part of a publicly traded company after it went through two acquisitions in less than a year. It was then that I realized this was something I could do. I went on to launch five startups that addressed unmet needs in the Latino and enterprise market.

Did being a Latino entrepreneur bring insight into new market opportunities?

My first couple of startups were a bilingual web portal and Groupon-type venture, and both were created to provide a service for the Latino community. I also launched a startup to help develop workforce pathways into the Salesforce ecosystem. Investors valued my combined expertise as someone with an engineering background who also understood the complexities of the Latino market and the startup world.

How can we encourage more Latino entrepreneurs in the AI space?

We need more deep tech entrepreneurship, training, mentorships, and ideation support. At Latinx Startup Alliance our mission is to empower Latino tech founders through resources and introductions to investors, offering them pitching opportunities and other resources a founder may need, including mentorships. Since being founded in 2011 in San Francisco, we have grown from six members to more than 1000 globally. I am also involved in efforts to encourage more Latina tech founders.

What is the role of investors in supporting Latino entrepreneurship?

First, we need to create more diverse limited partners and introduce them to tech investing to invest in both Latino and non-Latino VC funds. Opportunities also exist in curating deal flow where the founders understand the need for diverse limited partners and allow us to come in. Allowing for greater participation of smaller-scale investors could also encourage more involvement of Latino angel investors. These are things I encourage through my own venture firm work.

Leadership Spotlight: Jesse Martinez

How can education and policy support AI product development and entrepreneurship?

To really do that well you need a trifecta of education-businesses-government working together to develop the talent, create pathways for the talent and support research and development along with being inclusive and intentional with such opportunities. Stanford University has done a great job with that, and other universities are iterating on this model. Hispanic Serving Institutions are also taking on a greater role in preparing STEM candidates, and that's key because investors want to know if you have a background in STEM, especially when it comes to building AI solutions.

THE FACE OF LATINO SUCCESS IN AI

Case studies help to identify what has worked for successful Latino entrepreneurs in today's AI market. The case studies throughout this report examine the far-reaching impact of AI on entrepreneurship and the broader Latino startup community, the role of education in aligning the Latino and burgeoning technology market, and the policy and infrastructure needs that enable Latinos to thrive in AI. These case studies provide insight into the types of initiatives needed to equip Latino individuals with the tools and knowledge to drive industry innovation as well as the skill-building programs and vocational training opportunities to cultivate a pipeline of diverse talent.

Twenty-five Latinos are already leading the way in AI, as highlighted in Newsweek's article "Al Frente De Una Nueva Era" by Guillermo Diaz Jr. A few of those individuals referenced in this article are highlighted as case studies throughout this report. See Figure 15 for insight into all of the leaders of AI highlighted by Newsweek En Español América.

Figure 15: "Mentes Extraordinarias" graphic. Newsweek.
Visionaries Forging the Future of AI.

6.1 Case Study: Leadership Spotlight Rebecca Y. Gonzales

Rebecca Y. Gonzales is Chief Customer Officer with the Cantellus Group. She previously served as Global Head of Enablement at the Generative AI Innovation Center at Amazon Web Services. She has more than 25 years of experience translating technology into business value and social impact, including the responsible use of artificial intelligence.

What brought you to the AI field?

It wasn't something that I had even considered. I planned on being a journalist and thought that all tech jobs required certain math skills. After graduating, I landed a job at Citysearch Austin, working as a web editor, and that's where I developed my interest in technology. As I moved on to other established technology companies, I realized my superpower was in bridging the world of engineering and human experience. These organizations needed someone like me to do that as they pursued business development opportunities and started to integrate AI and machine-learning tools.

What is the role of education in creating more career pathways for Latinos in AI?

Education plays a huge role in getting more Latinos into AI and other emerging technologies. At the same time, I feel like too much focus on having the "right" degree from the "right" university can be a limiting factor for some members of our community. Right now, many large tech firms are removing the requirement for a four-year degree from many entry-level roles. This puts more focus on experience, both work history and lived experience, and it's great news for expanding more Latino pathways in AI.

Did you have a network to rely on in the technology field?

That has been a challenge as a Latina. I found that many of the people developing the technology didn't look like me, and when you don't see people that look like you in management and leadership positions it's hard to imagine yourself having one of those positions. I have had only one Latino VP over my entire 30-year career in technology, and he's still one of my mentors. Fortunately, I worked in places where I was able to exercise my voice and be heard, and that strengthened my confidence as a contributor and leader. And since I didn't start with a network, I created one.

Can organizations do a better job of taking a more "values fit" approach to hiring?

I believe this approach could increase opportunities for more candidates like me. I have always looked for opportunities that were aligned with my own values. I am interested in

Leadership Spotlight: Rebecca Y. Gonzales

projects that benefit humanity, and in particular marginalized groups. I consider myself a technology humanist, and the choices I made in my career have been driven by opportunities to work on projects that align with those values, particularly in the area of Responsible AI, as well as with opportunities that allow me to stretch my professional growth.

What are ways to increase Latino representation in AI and tech fields?

Expanding recruitment outreach is a start, and then creating mentorship opportunities can help too. Do not let a lack of traditional tech education hold you back. Apply for the job, ask for that mentor, go to the AI meetup or event. And finally, don't listen to anyone that says you can only achieve your goals one way. Everyone has a different path and only you know what is right for you.

6.2 Case Study: Leadership Spotlight José Morey, M.D.

José Morey, M.D., is CEO and Founder of Ad Astra Media LLC. In addition to his medical practice, he leads multidisciplinary teams that sit at the epicenter of biotechnology, artificial intelligence, and aerospace. He has served as a consultant for NASA, Forbes, MIT and the White House Office of Science and Technology.

How do we increase Latino participation in the AI and tech workforce?

Part of the answer is in making science and math accessible, especially for underrepresented communities through pathway programs that lead to STEM careers. The field of AI also requires an ability to think creatively beyond any one discipline or role. As we prepare more Latino students in science, technology, engineering and math fields, it's important that they see their roles as going far beyond these specialties.

What insight can Latinos bring to creating and reaching new markets through AI and tech?

Ultimately, technology is about people and our society needs people of all backgrounds, including Latinos, who can transform and create new markets at the intersection of art and science. However, even before we get to that point, we need to find a way to close "the dream gap," which is the whole purpose of Ad Astra Media. One of our projects, in the Valle de Bravo in Mexico, involved a partnership with a nonprofit using our intergalactic comic characters and stories designed to inspire youth to pursue STEM career paths. What we found is that every single one of those girls now wants to become an engineer, or go into space, because the dream gap has been closed.

How can companies leverage AI to support that journey from awareness to action?

Technology is allowing for greater personalization, and a number of startups are exploring ways to create more engaging and targeted learning experiences at the K-12 level and beyond. For example, Sphero makes programmable robots and engineering kits, Osmo uses game-based approaches to engage students with STEM principles, and Dreambox has developed adaptive math learning programs that adjust to how individual students learn.

What are some business models that you see emerging in this edtech space?

New models will emerge that engage in storytelling, or immersive learning experience, and games that can help bridge that dream gap, as well. For example, our partnership with Conectado leverages LLMs and other technologies through an immersive 3D education platform designed to be accessible for kids from underserved communities. Partnerships with institutes, investors and shared interest organizations, can also help ensure that these emerging models have market reach. We have partnered with NGOs and local nonprofits

Leadership Spotlight: José Morey, M.D.

to make sure content reaches kids in the rural mountains of Mexico through our Valle de Bravo project, and we are also launching a new manga/anime series through Latino Alternative television that incorporates indigenous perspectives to teach about climate science indigenous perspectives.

In the era of AI, do businesses need more technologists or more humanists?

The field of AI requires an ability to think beyond any one discipline or role. One of the talks I give, when speaking before people in the tech and AI fields, is on Leonardo da Vinci. His various perspectives on the world made him a great innovator and thinker. Each new skill increased his strength in another skill, and that's what has driven my own professional endeavors beyond medicine to biotech, space, and AI. It's at this intersection of art and science where true innovation lies.

CONCLUSION AND RECOMMENDATIONS

8.1 Where Do We Go from Here

The meteoric rise of AI has upended the U.S. and global economies, with 72% of organizations relying on this technology in 2024, up from 20% in 2017 (McKinsey Global Survey on AI). As AI is slated to add $15.7 trillion to the global economy by 2030, the private sector has responded by aggressively investing in its development. These investments are concentrated in states with large and thriving Latino populations.

Latinos, who are solely responsible for the increase in the working-age population between 2017 and 2022 and who are much younger on average than other cohorts, are key to leading the development and successful employment of AI in America. Latinos are rapidly becoming critical players in this space, who staff 10% of technical roles in AI (CSET, 2024), likely aided by the increasing educational alignment that has seen this cohort rise to 14.7% of all computer science (CS) degrees earned in 2023-2024. Still, there remain areas of opportunity in terms of Latino representation that prevent fully leveraging this cohort to maintain the spot of the U.S. as the world leader in this technology.

Further investment in education and training in STEM and AI-specific programs targeted at the U.S. Latino community will prepare a young generation of Latinos to develop and use rapidly evolving AI technologies. Diverse hiring panels with recruiters who share a similar background as candidates will be better able to identify potential, and thus, generate value for the industry and shareholders. Last, the government, academia and industry must work together to implement ambitious initiatives to ensure that the benefits of AI are accessible to all. The future of AI is Latino.

We conclude with the following recommendations:

For Everyone: As this document shows, AI is not just a technical competency, it is changing many aspects of our professional and personal lives. Everyone should have literacy with AI as the technology may not replace you but someone with literacy will.

For CEOs: Whether you are a corporate CEO, small or medium business CEO or a business or tech founder, encourage your organization to understand this data and implement hiring and retaining strategies that leverage this talented and growing cohort. Ensure mentoring programs for incoming employees and create promotion and role model pathways so these workers can see what they may achieve.

For Recruiters and Hiring Managers: Check your job postings for implicit bias and leverage performance evaluations metrics that capture productivity, instead of cultural, racial, or ethnic identity. If possible, rely on diverse hiring panels that can better understand the value that potential employees bring to the table.

For Educators: First, gain AI and technology literacy. Even if not in your school, we gave many examples that can help you gain knowledge and skills. Talk to your students about pursuing a career in STEM and highlight the progress Latinos have made in achieving representation in prestigious STEM fields. Also, keep in mind that every job will be influenced by AI and we should all gain literacy from this technology shift in our professional and personal lives.

For Government: Continue to drive policy and investment that will enable new tech and AI skills and create new jobs. If you work in government, ensure your branch works closely with academia and industry to develop metrics that create collaboration and not segmentation. Highlight and leverage the fastest growing cohort in the country so that the U.S. not only maintains but grows its technology superpower status.

For Parents: If you're the parent of a Latino student, talk to them about pursuing paths in STEM and discuss how more than 10% of workers in the field of AI are Latino. Encourage them to contact business initiatives that empower Latinos in tech and AI. Become AI literate yourself as this will enable you to communicate with your children but also give you insights to opportunities for your own benefit. Be a part of the growth opportunities for your children.

For Students: Opportunities are growing by the day to grow your skills in AI no matter your current level of education. Be open-minded to new technologies and curious about how you could use these inventions. You may also find you may wish to alter them for your needs. These tools are meant to serve you, and you can be the next creator of a new technology that alters society for the better. Jobs will require a more tech savvy worker. Many jobs will be displaced, and in their place, many new jobs will be created. Do not be intimidated but embrace this moment to skill, upskill, and reskill.

OUR STORY:
THE FUTURE OF AI IS LATINO

The future of AI depends on the ability to harness diverse perspectives and talents. The continued integration of Latinos into the AI workforce is essential for driving innovation and ensuring that AI technologies benefit all sectors of society.

This narrative arc incorporates the AI revolution and its broad economic impact, setting the stage for discussing the role of Latinos in this transformative era. It emphasizes the need for collaboration across business, academia, and government to build an inclusive and innovative AI future.

Character: Elena Perez
Time: 2046 (22 years in the future)
Artifact: Annotation AI
Issue solved: Data quality, accuracy, and liquidity, Latino C-Level Advancement
Career: CEO of Annotation AI
What Elena creates: Annotation AI for a Bias Free World, an AI powered bias checking system that can be applied to any training data, LLMs or code to ensure diverse perspectives and training data are used in any AI powered system

Story premise:
Elena couldn't help but laugh in bewilderment as she reflected back on early generative AI images of Guatemalan Americans wearing traje tipico (traditional indigenous clothing) and huipil (blouse). The prompts she gave were often simple, "show me several images of Guatemalan American girls" or "Guatemalan Americans at work in an American suburb" and yet the results were always underwhelming and riddled with essentialisms and class-based stereotypes that came to personify early generative AI images. Elena enjoyed testing the limits of generative AI; simple prompts were an effective means for revealing underlying biases in code.

Elena was used to seeing these kinds of unimaginative and detracting images growing up. The sometimes-subtle biases were not noticeable to the general public at that time, such as the historicization of cultural garb or the assumption that Guatemalan Americans working in the suburbs would be performing outdoor labor. As a child, she could never quite wrap her head around how these things were overlooked by so many. After seeing her grandmother's many achievements in academia as a molecular microbiologist, and little representation of her grandmother's story emigrating from Ciudad de Guatemala as a teenager to attend university, she was determined to harness the power and potential of technology to change

these latent biases in LLMs for good. Elena didn't want to simply streamline bias evaluations in LLMs to generate more fair, accurate, and diverse representation for biased tools, she wanted to alter the entire system. She wanted to bridge the digital divide.

In 2026, at the age of 23, Elena created Annotation AI for a Bias Free World, an AI powered bias checking system that could be applied to any training data, LLMs or code to ensure diverse perspectives and training data were used in any AI powered system. Elena knew her people, as well as Latinos in the U.S. and elsewhere, deserved better and that accurate representation was key to advancing in the corporate world. Growing up, she saw a tech world that was riddled with biases; a lack of diversity at the leadership level made this all too evident. She wanted to create an AI system that would ensure those like her got to see themselves in all levels of society.

Watching her grandmother's industriousness as a Guatemalan immigrant and her mother's perseverance through the 2008 market crash and subsequent job loss after a racially charged incident at work made Elena exceedingly aware of just how fickle and unfair the world could be. After Elena's parents separated when she was in elementary school at the age of eight, her mother moved to the outskirts of San Antonio, Texas where the rent was more affordable. While Elena's grandmother had been successful in her career, her mother's professional life had been comparably unstable as the anti-immigration fervor of the early 2000s followed her mother into the job market as a dark-skinned Guatemalan American woman.

The idea came to Elena after participating in well-funded after-school STEAM programming in high school, specializing in XR and AI innovation teaching Latino youth how to code, train for manufacturing jobs using job simulation models in XR, and build effective data visualization tools for social use and analysis. The STEAM program, Futuros Latinos, was connected with global companies leading in AI jobs placement training, which saw the value in training diverse youth as a future workforce. Many of the program's graduates went on to attend leading computer science and engineering programs at top universities. By virtue of being in San Antonio where tech and AI startups were abundant in the 2020s, Elena took to coding fast and considered herself something of a code poet. When she wasn't at school or working behind the counter at The Original Donut Shop, she would attend local tech conferences to learn about the latest AI developments where she rarely saw Latinos on stage, a realization that only made her more determined. She knew AI systems were only as good and bias free as their makers and knew that no one small team of people could possibly create an AI system that would function fairly and accurately.

When Elena graduated from Arizona State University with the help of a Pell Grant, she already had a working prototype of her AI model created. Now it was time to take it to the next level. She used her global connections from the university to collaborate with groups of developers from varying regions of the world, representing significant diversity in race, ethnicity, gender, religion, culture, socio-economic background, age, disability, and sexual orientation. She found

Latinos all over the globe eager to join her in this project and mission, and who saw the value of intersectional development. These developers trained the AI on collective regional historical texts and oral knowledge to generate more accurate training data. Community involvement in knowledge generation was paramount to generating good data; community engagement in data generation resulted in financial returns for local municipalities in need of investment while also spurring job growth.

The teams ensured Annotation AI could be used to provide notes on existing historical texts for modern day perspectives on historical issues, allowing the model to conduct cross-referential analysis to mitigate bias in generative AI applications, functioning both as a general platform as well as an API. After launching in 2026, Annotation AI went on to become a leading global AI company influencing tech giants such as Google and Meta, significantly altering how

governments worldwide legislated AI and in turn how companies procured, analyzed, and produced data. The success had a ripple effect across the globe as more and more Latino youth started seeing more diverse depictions of their communities and histories reflected back to them through AI.

Twenty years after Annotation AI launched, Elena found herself stepping down from her CEO role to pursue new endeavors. Now that she had influenced the tech giants and governmental policy, she decided to go lead the largest tech corporation in the world and expand her impact. As she walked into the office on her first day on the job, she couldn't help but delight in all of the Latino faces greeting her. Her smile reflected the inner knowing that her collective work through Annotation AI helped make possible the diverse room she helped create.

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APPENDIX

The AI major fields were classified according to STEM (Science, technology, engineering, and math) to produce tables and graphs about Fall Enrollment, Awarded Degrees, and Employment. More specifically, the STEM Majors List includes Astronomy, Biology, Chemistry, Computer science, Engineering, Earth sciences, Health sciences, Information technology, Mathematics, and Physics.

Table 1 – All awarded degrees: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions, separated by race/ethnicity: Academic years 2012-13 through 2021-22

Year	Hispanic	(%)	White	(%)	Black	(%)	Asian*	(%)	Total (1)
2012-2013	53,015	9.2	337,241	58.75	47,710	8.31	56,995	9.93	574,000
2013-2014	58,104	9.6	348,586	57.70	49,455	8.19	59,088	9.78	604,167
2014-2015	63,689	10.0	353,950	55.67	50,760	7.98	62,193	9.78	635,800
2015-2016	67,822	10.2	358,113	53.60	48,512	7.26	66,528	9.96	668,091
2016-2017	74,461	10.6	367,260	52.10	49,888	7.08	71,633	10.16	704,861
2017-2018	81,816	11.2	376,795	51.37	51,256	6.99	77,133	10.52	733,459
2018-2019	89,797	11.9	384,765	50.83	53,993	7.13	82,234	10.86	756,960
2019-2020	95,031	12.3	385,351	49.75	55,655	7.19	86,555	11.17	774,598
2020-2021	101,785	12.9	385,223	48.71	59,853	7.57	92,232	11.66	790,886
2021-2022	106,892	13.5	385,048	48.79	61,074	7.74	98,926	12.53	789,264
Total (2)	**792,412**	**11.27‡**	**3,682,332**	**52.36‡**	**528,156**	**7.51‡**	**753,517**	**13.32‡**	**7,032,086**

*Asian/Pacific Islander; (1) sum of all races includes two or more races, American Indian or Alaskan native and degrees conferred to non-residents (2) sum of all years. ‡ calculated by the total awarded degrees in each race/ethnicity divided by the total number of awarded degrees.

Table 2 - All awarded degrees to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions, separated by gender: Academic years 2012-13 through 2021-22

Year	Males	(%)	Females	(%)	Total (1)
2012-2013	37,032	69.9	15,983	30.1	53,015
2013-2014	40,583	69.8	17,521	30.2	58,104
2014-2015	43,847	68.8	19,842	31.2	63,689
2015-2016	45,946	67.7	21,876	32.3	67,822
2016-2017	50,077	67.3	24,384	32.7	74,461
2017-2018	54,801	67.0	27,015	33.0	81,816
2018-2019	59,763	66.6	30,034	33.4	89,797
2019-2020	62,038	65.3	32,993	34.7	95,031
2020-2021	64,626	63.5	37,159	36.5	101,785
2021-2022	67,668	63.3	39,224	36.7	106,892
Total (2)	**526,381**	**66.43‡**	**266,031**	**35.57‡**	**792,412**

(1) sum of Hispanic males and females, (2) sum of all years, ‡ calculated by total males (or females) divided by the total number of Hispanic students.

Table 3 – Associate's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions: Academic years 2012-13 through 2021-22

Year	Total (1)	Hispanic	(%)
2012-2013	88,800	11,867	13.4
2013-2014	87,366	12,434	14.2
2014-2015	88,401	13,255	15.0
2015-2016	79,869	12,699	15.9
2016-2017	82,334	13,847	16.8
2017-2018	85,271	15,531	18.2
2018-2019	86,833	16,600	19.1
2019-2020	85,231	17,075	20.0
2020-2021	87,422	17,861	20.4
2021-2022	84,856	18,024	21.2
Total (2)	**856,383**	**149,193**	**17.42‡**

(1) sum of all races includes two or more races, American Indian or Alaskan native and degrees conferred to non-residents, (2) sum of all years, ‡ calculated by the total of associate's degrees awarded to Hispanic students divided by the total number of awarded degrees.

Table 4 – Associate's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions, separated by gender: Academic years 2012-13 through 2021-22

Year	Males	(%)	Females	(%)	Total (1)
2012-2013	9,060	76.3%	2,807	23.7%	11,867
2013-2014	9,373	75.4%	3,061	24.6%	12,434
2014-2015	9,862	74.4%	3,393	25.6%	13,255
2015-2016	9,200	72.4%	3,499	27.6%	12,699
2016-2017	9,775	70.6%	4,072	29.4%	13,847
2017-2018	10,872	70.0%	4,659	30.0%	15,531
2018-2019	11,554	69.6%	5,046	30.4%	16,600
2019-2020	11,699	68.5%	5,376	31.5%	17,075
2020-2021	11,600	64.9%	6,261	35.1%	17,861
2021-2022	11,899	66.0%	6,125	34.0%	18,024
Total (2)	**104,894**	**70.3‡**	**44,299**	**29.7‡**	**149,193**

(1) sum of Hispanic males and females, (2) sum of all years, ǂ calculated by total males (or females) divided by the total of associate's degrees awarded to Hispanic students.

Table 5 – Bachelor's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions: Academic years 2012-13 through 2021-22

Year	Total (1)	Hispanic	(%)
2012-2013	302,340	25,310	8.4%
2013-2014	318,612	28,655	9.0%
2014-2015	335,849	32,264	9.6%
2015-2016	354,794	36,025	10.2%
2016-2017	376,869	40,396	10.7%
2017-2018	395,235	44,047	11.1%
2018-2019	412,962	48,520	11.7%
2019-2020	429,352	52,909	12.3%
2020-2021	437,344	57,404	13.1%
2021-2022	435,506	58,616	13.5%
Total (2)	**3,798,863**	**424,146**	**11.17‡**

(1) sum of all races includes two or more races, American Indian or Alaskan native and degrees conferred to non-residents, (2) sum of all years, ǂ calculated by the total bachelor's degrees awarded to Hispanic students divided by the total number of awarded degrees.

Table 6 – Bachelor's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions, separated by gender: Academic years 2012-13 through 2021-22

Year	Males	(%)	Females	(%)	Total (1)
2012-2013	15,997	63.2%	9,313	36.8%	25,310
2013-2014	18,231	63.6%	10,424	36.4%	28,655
2014-2015	20,158	62.5%	12,106	37.5%	32,264
2015-2016	22,551	62.6%	13,474	37.4%	36,025
2016-2017	25,150	62.3%	15,246	37.7%	40,396
2017-2018	27,213	61.8%	16,834	38.2%	44,047
2018-2019	29,912	61.6%	18,608	38.4%	48,520
2019-2020	32,159	60.8%	20,750	39.2%	52,909
2020-2021	34,144	59.5%	23,260	40.5%	57,404
2021-2022	34,465	58.8%	24,151	41.2%	58,616
Total (2)	**259,980**	**61.3%‡**	**164,166**	**38.7%‡**	**424,146**

(1) sum of Hispanic males and females, (2) sum of all years, ‡ calculated by total males (or females) divided by the total of bachelor's degrees awarded to Hispanic students.

Table 7 – Master's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions: Academic years 2012-13 through 2021-22

Year	Total (1)	Hispanic	(%)
2012-2013	95,375	4,268	4.5%
2013-2014	100,078	4,617	4.6%
2014-2015	112,260	4,969	4.4%
2015-2016	129,142	5,291	4.1%
2016-2017	139,282	5,655	4.1%
2017-2018	140,255	6,291	4.5%
2018-2019	138,192	7,162	5.2%
2019-2020	142,799	7,846	5.5%
2020-2021	146,594	8,646	5.9%
2021-2022	139,944	10,170	7.3%
Total (2)	**1,283,921**	**64,915**	**5.1%‡**

(1) sum of all races includes two or more races, American Indian or Alaskan native and degrees conferred to non-residents, (2) sum of all years, ‡ calculated by the total master's degrees awarded to Hispanic students divided by the total number of awarded degrees.

Table 8 – Master's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions, separated by gender: Academic years 2012-13 through 2021-22

Year	Males	(%)	Females	(%)	Total (1)
2012-2013	2,934	68.7%	1,334	31.3%	4,268
2013-2014	3,143	68.1%	1,474	31.9%	4,617
2014-2015	3,363	67.7%	1,606	32.3%	4,969
2015-2016	3,450	65.2%	1,841	34.8%	5,291
2016-2017	3,702	65.5%	1,953	34.5%	5,655
2017-2018	4,079	64.8%	2,212	35.2%	6,291
2018-2019	4,604	64.3%	2,558	35.7%	7,162
2019-2020	4,958	63.2%	2,888	36.8%	7,846
2020-2021	5,343	61.8%	3,303	38.2%	8,646
2021-2022	6,230	61.3%	3,940	38.7%	10,170
Total (2)	**41,806**	**64.4%‡**	**23,109**	**35.6%‡**	**64,915**

(1) sum of Hispanic males and females, (2) sum of all years, ǂ calculated by total males (or females) divided by the total of master's degrees awarded to Hispanic students.

Table 9 – Doctor's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions: Academic years 2012-13 through 2021-22

Year	Total (1)	Hispanic	(%)
2012-2013	26,577	864	3.3%
2013-2014	28,070	891	3.2%
2014-2015	28,037	1,026	3.7%
2015-2016	28,238	1,047	3.7%
2016-2017	28,544	1,123	3.9%
2017-2018	29,455	1,135	3.9%
2018-2019	29,854	1,234	4.1%
2019-2020	29,591	1,206	4.1%
2020-2021	28,822	1,361	4.7%
2021-2022	32,321	1,607	5.0%
Total (2)	**289,509**	**11,494**	**4.0%‡**

(1) sum of all races includes two or more races, American Indian or Alaskan native and degrees conferred to non-residents, (2) sum of all years, ǂ calculated by the total doctor's degrees awarded to Hispanic students divided by the total number of awarded degrees.

Table 10 – Doctor's degrees awarded to Hispanic students: number and percentage distribution of science, technology, engineering, and mathematics (STEM) degrees/certificates conferred by postsecondary institutions, separated by gender: Academic years 2012-13 through 2021-22

Year	Males	(%)	Females	(%)	Total (1)
2012-2013	485	1.8%	379	1.4%	26,577
2013-2014	546	1.9%	345	1.2%	28,070
2014-2015	621	2.2%	405	1.4%	28,037
2015-2016	606	2.1%	441	1.6%	28,238
2016-2017	669	2.3%	454	1.6%	28,544
2017-2018	658	2.2%	477	1.6%	29,455
2018-2019	728	2.4%	506	1.7%	29,854
2019-2020	692	2.3%	514	1.7%	29,591
2020-2021	778	2.7%	583	2.0%	28,822
2021-2022	915	2.8%	692	2.1%	32,321
Total (2)	**6,698**	**2.3%‡**	**4,796**	**1.7%‡**	**289,509**

(1) sum of Hispanic males and females, (2) sum of all years, ‡ calculated by total males (or females) divided by the total of doctor's degrees awarded to Hispanic students.

Tables 1-10 SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Completions component, Fall 2012 through Fall 2021 (final data) and Fall 2022 (provisional data). (This table was prepared in October 2023.)

Table 11 – Computer Sciences Total Awarded Degrees by Race.

Year	Hispanic (%)	White (%)	Black (%)	Asian (%)	Native/ Hawaiian‡ (%)	Total (1)
2011	7,761 (9.5)	54,677 (67.2)	11,139 (13.7)	6,864 (8.4)	903 (1.1)	81,344
2022	21,745 (14.7)	77,812 (52.3)	17,127 (11.6)	29,482 (20.0)	1,407 (1.0)	147,213
Total (2)	29,506 (12.9)	132,489 (58.0)	28,266 (12.4)	36,346 (15.9)	1,950 (0.9)	228,557
Growth¥	180%	42.3%	53.8%	329.5%	55.8%	81%

‡ American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander combined. The analyses did not include unknown races, two or more races, or temporary visa holders 1) sum of all races for each year, (2) sum of all years, ǂ calculated by the total degrees awarded to each race/ethnicity divided by the total number of awarded degrees.

Table 12 – Computer Sciences by Type of Degrees Awarded and Hispanic Students.

Degree	Associates	Hispanics	Bachelor's	Hispanics	Master's	Hispanics	Ph.D.	Hispanics
Year	n	n (%)	n	n (%)	n	n (%)	n	n (%)
2011	34,239	3,537 (10.3)	37,043	3,539 (9.6)	9,339	666 (7.1)	723	19 (2.6)
2022	31,075	5,876 (18.9)	89,846	13,042 (14.5)	25,325	2,760 (10.9)	967	67 (6.9)
Total*	65,314	9,413 (14.4)	126,889	16,581 (10.8)	34,664	3,426 (4.8)	1,690	86 (2.0)
Growth¥	-9.3%	66.1%	142.5%	268.5%	171.1%	314.4%	33.7%	252.6%

*The total number of degrees awarded for each degree presented in this table included American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian/Pac Islander, and White. The analyses did not include unknown races, two or more races, or temporary visa holders. ǂ calculated by the total degrees awarded to Hispanic students divided by the total awarded degrees for each type of degree. ¥ calculated by [(2022-2011)/Total]*100.

Table 13 – Degrees Awarded in Computer Sciences by Hispanic Students and Gender.

Degree	Associates		Bachelor's		Master's		Ph.D		Total (1)
Year	Males (%)	Females (%)	Males (%)	Females (%)	Males (%)	Females (%)	Males (%)	Females (%)	
2011	2,786 (78.8)	751 (21.2)	2,891 (81.7)	648 (18.3)	488 (73.3)	178 (26.7)	19 (100)	0 (0)	7,761
2022	4,564 (77.7)	1,312 (22.3)	10,327 79.2)	2,715 (20.8)	1,952 (70.7)	808 (29.3)	56 (83.6)	11 (16.4)	21,745
Total (2)	7,350 (78.1)	2,063 (21.9)	13,218 (79.7)	3,363 (20.3)	2,440 (71.2)	986 (28.8)	75 (87.2)	11 (12.8)	29,506
Growth	63.8%	74.7%	257.2%	319%	300%	353.9%	194.7%	NA	180.2%

(1) Sum of all degrees awarded to Hispanic students. (2) sum of years.

Source: Tables 11-13 IPEDS Completions Survey from Department of Education, by CIP code (11 – Computer and Information Sciences and Support Services). Data Builder website https://ncsesdata.nsf.gov/builder/ipeds_c (accessed on 08.07.2024).

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