

STATE OF DIVERSITY

The Latine Tech Ecosystem



Many reports highlight the role of Latine communities as consumers and focus on demographic shifts in the U.S. Latine population. It is critical in this Artificial Intelligence (AI)-led era that we *also* focus on the role of Latine people as creators of technology and investors in the sector.

As an immigrant, a native Spanish language speaker, and the child of a single parent household, the statistics were stacked against me. An engineering education, with a concentration in computing and hardware, helped create new opportunities for upward economic mobility and influence emerging technology development throughout my career. Without continued progressive state, federal, and private policies, there won't be enough new stories like mine.

We are failing to leverage the power of technology to close gaps of access, increase cultural fluency, and build and invest in more responsible technology for a global competitive landscape. At the current pace, U.S. Latine technical talent representation would achieve parity in the year 2077 – that is an untenable position for a country expecting to lead globally and maintain the vitality of their citizenry domestically. Amidst the current pace of AI development and its impact on education, workforce, safety nets, and health – coupled with the [change of U.S. demographics anticipated by 2030](#) – Latine talent investment will be even more critical for all of us.

As a country, we need to adopt educational, workforce, and new venture capital allocation policies that significantly invest in the fastest-growing, youngest cohort of innovators. The current investment is deficient. The percentage of investments distributed to U.S.-based Latine founders (1.3%) is at the lowest point over the last 5 years. Without capital to grow new ventures, Latine tech innovators and innovations are being shut out disproportionately. Public policy efforts to increase investment in equitable computer science education; tech pathways that quickly adapt to the pace of emerging technology; inclusive workplaces where tech workers have increased rights, equitable pay, advancement; and equitable venture capital funding are critically needed to flip these statistics compromising our preeminence in technology development and sector.

Technology changed the course of my career and life; and I hope that with our partners and community in coalition, we can help Latine talent realize and shape the opportunities that technology and innovation will bring to all.

Lili Gangas

Lili Gangas

Chief Technology Community Officer
Kapor Foundation



With nearly 80 percent of new jobs over the next decade going to a Latino, the critical need to increase education, skills, opportunities, and sense of belonging for Latine in technology is beyond an investment in our community, but in the present and future of the United States to compete globally.

It starts with access to a computer science curriculum in providing Latine students – who make up more than one in four of the student population in America – greater equal footing in developing digital literacy and computational thinking skills plus the tools, knowledge and resources needed to make an impact in our increasingly tech-driven universe, which are in high-demand in the workforce. CS curriculum will also prepare and encourage more Latine to pursue careers in tech, addressing what I call the “tech-edquity gap” as well as creating economic opportunities for themselves, families and communities.

A more tech-prepared student and workforce will also foment innovation and entrepreneurship through a CS curriculum that fosters creativity, innovation, resilience in problem solving, and an entrepreneurial mindset and, thus, creating a greater chance for new tech solutions and advancing economic growth for the United States.

Taking a step back, access to early CS exposure through “making” and modeling will also develop a sense of belonging, confidence and self-efficacy for youth, which will support them in higher education and career paths in STEM fields and innovative entrepreneurship. This cycle will also create Latine role models to inspire other generations to follow tech education, workforce, and entrepreneurship pathways. There is no shortage of Latine talent, but there is a shortage of opportunity. Our collective job is to connect our promising, willing and ever-growing talent to those opportunities.

The findings of our *State of Tech Diversity: The Latine Tech Ecosystem*, while not surprising, are a stark reminder of the critical need to create a more equitable educational system, workforce development, and structure promoting entrepreneurship, through tech for Latine. America and the world are counting on the burgeoning Latine community to fuel innovation, solve problems and accelerate economic growth for America. We need to collectively share resources, galvanize stakeholders including policy makers, and collaborate with partners like Kapor Foundation and CHCI who share our vision for a more equitable and diverse tech landscape that reflects our society as a whole.

Antonio Tijerino

Antonio Tijerino

President & CEO

Hispanic Heritage Foundation



The United States has the best innovation ecosystem in the world, yet status-quo diversity trends across the landscape could threaten its standing. Latine people now constitute an estimated 20% of the nation's population and 25% of the nation's youth. This cohort is driving U.S. growth as significant demographic shifts are underway. Unfortunately, the latest data continues to tell the same story of alarming and persistent under-representation of Latine talent across the innovation ecosystem. From inventors, technologists, and founders to venture capital investors, the U.S. Latine population's significant demographic and economic influence sharply contrasts with the current state of the tech landscape, prompting a need for reflection and inquiry.



As Latine people inch closer to becoming the new majority, it is essential to understand the unique challenges and opportunities Latine talent face in the tech industry. By drawing attention to this part of the ecosystem, we can identify the barriers that hinder Latine representation and participation in the sector and develop strategies to overcome them. The obstacles Latine students in the U.S. educational system face are well documented; they face many barriers to entering STEM fields. Researchers have offered numerous explanations to address this issue, most falling into three broad categories: school curriculum, structural, and cultural factors. The obstacles continue into their careers - SomosVC found similar barriers to entry for Latine venture capital investors in its [2022 Annual Report](#). Despite decades of research and concerted efforts from organizational leaders and policymakers alike, diversity and inclusion inequity persists in many U.S. organizations, industries, and sectors. The innovation ecosystem is not an exception.

There is an evident need to address the challenges encountered by Latine people as they pursue STEM careers. We are encouraged that the issues have finally come to light and that organizations like Kapor Foundation, Hispanic Heritage Foundation, Congressional Hispanic Caucus Institute, and SomosVC are driving a national discourse focusing on support and solutions for the Latine cohort.

Mariela Salas

Mariela Salas
Executive Director
SomosVC

The world is in the midst of profound societal transformation. Populations across the globe are undergoing significant demographic change. Increasing inequality threatens the well-being of entire communities and countries. And unprecedented advances in technology have the potential to remake all aspects of our lives.

In the United States, the Latine community finds itself at the heart of this change. While Latine communities have been a part of American society since its earliest days, their tremendous growth over the last several decades means that Latine people account for nearly one in five people in the country. This large and still-growing population is also quite young—more than one-quarter of all K-12 students and more than one-fifth of college students are now Hispanic, and 78% of U.S. labor force growth for the next 10 years will be Latine. Our investment into the Latine community will have implications for how well our national economy performs long into the future, affecting every American's well-being. Alarming, our nation has severely underinvested to date. This must change – immediately.

Latine leaders must lead this charge. Unfortunately, Latines are dramatically underrepresented in leadership roles – among policymakers, corporate executives, philanthropic leaders, tech founders, and just about every other sector and industry. The time for platitudes and values-speak is done; only meaningful action and impact can be tolerated moving forward – in respect for the Latine community and in service to our nation's health and wellbeing.

This report highlights the challenges that exist for Latine people in the tech ecosystem and shares crucial recommendations for policies and actions that are needed to advance the role of Latine talent in tech. The recommendations put forward in this report will strengthen K-12 and postsecondary education; build a strong, globally competitive workforce; and unlock catalytic venture capital that drives unparalleled innovation.

By committing resources to support the extraordinary talents of the Latine community and by lifting up its leaders, we can ensure the vitality of this segment of our population, apply its brilliance and creativity to supercharge the technological revolution, and ensure a prosperous future for all Americans.

Marco A. Davis

Marco A. Davis

President & CEO

Congressional Hispanic Caucus Institute (CHCI)



EXECUTIVE SUMMARY

Advancements in technology will increase the demand for skilled technical professionals over the next decade. Yet, entire segments of the population remain excluded from the tech ecosystem. Despite Latine people accounting for 18.7% of the U.S. population and half of the country's population growth, they have been systematically excluded across computer science (CS) education, postsecondary tech pathways, tech workforce, and entrepreneurship/venture capital. In the six states home to two-thirds of the total Latine population (California, Texas, Florida, New York, Arizona, and Illinois), 40% of the Latine workforce in these states are at risk of being displaced by tech automation. This report examines the current state of Latine representation across the tech ecosystem and identifies the urgent solutions required to ensure a more equitable future.

KEY FINDINGS

K-12 CS Education:

- Only 78% of Latine students have access to foundational CS courses in their high schools, in comparison to 82% of white students and 89% of Asian students.
- Latine students comprise 29% of the high school population, but just 21% of students in foundational CS courses, 20% of students in AP CS Principles, and 12% of students in AP CS A.
- Just 45% of Latino boys and 38% of Latina girls passed the AP CS P exam.

Postsecondary Computing Pathways:

- Latine students comprise just 13% of bachelor's degrees conferred in computing disciplines, despite comprising 17% of the bachelor's degrees conferred across all majors.
- HSIs were responsible for conferring over half (53%) of CS associate's degrees and 40% of CS bachelor's degrees earned by Latine students.
- Just 8% of bootcamp participants were Latine.
- Latine workers held 16% of registered tech apprenticeship roles in 2023, a 133% increase between 2018 and 2023.



Tech Workforce:

- Nearly 1 in 5 workers in the U.S. is Latine; however, just 1 in 10 workers in tech is Latine. In management, only 5% of executive leadership roles and 3% of tech company board seats are held by Latine professionals.
- Latine talent comprise just 6% of technical roles across the largest U.S.-based tech companies. At the current pace, parity in the Latine technical workforce will not be reached until the year 2077.
- For every dollar of salary made by white men, Latino men make 3% less and Latina women make 8% less.
- Despite comprising only 10% of the tech workforce, Latine talent has been disproportionately impacted by recent layoffs (comprising 11.5% of laid off workers).

Entrepreneurship & Venture Capital:

- Just 6% of all VC investment professionals are Latine, and just 5% of partner-level VC investments professionals are Latine.
- The majority of Latine-founded VC firms are focused on early stage investments, with 80% focused on seed stage funding in 2022.
- At the height of venture funding in 2021, with over \$250B invested, Latine tech founders only received 3% of capital.
- As VC funding slowed in 2023, capital deployed to Latine entrepreneurs dropped to just 1.3% of all U.S. venture investments.

Given technology's role in driving our economy and transforming the nature of work, it is imperative to fully include Latine talent in this sector to drive innovation, inclusive product development, economic opportunity, and national competitiveness. This moment calls for substantial, long-term investments, in areas including K-12 computing education, upskilling and reskilling talent, promoting alternative pathways for Latine talent to enter tech, and expanding investment capital in Latine-led funds and companies.





INTRODUCTION

The global economy is undergoing a technological revolution catalyzed by advancements in artificial intelligence, machine learning, and cloud computing. The demand for skilled technical professionals is expected to exponentially grow over the next decade, with many of those jobs focused on emerging technologies. The tech workforce is projected to grow [2x faster](#) than the overall U.S. workforce in the next decade, adding approximately [280,000 tech workers](#) year-over-year. For example, [data scientists and data analyst occupations](#) are projected to grow by 266%, [cybersecurity](#) is projected to grow by 242%, and software developers are projected to grow 180% over the next decade. With technology no longer siloed in its own industry (i.e., [58% of technology professionals worked in other industries](#)), the strength and diversity of the tech ecosystem has an outsized impact across every industry and sector.

Despite experiencing rapid population growth, with an estimated [78% of net new U.S. workers](#) between 2020 and 2030 being Latine¹, they are systematically excluded from opportunities to develop technological skills and contribute to the development and deployment of new technology products and solutions. Continuing to exclude entire segments of the population, particularly the [youngest and fastest growing](#), is a strategic failure and threatens the country's long-term economic viability and competitiveness. The exclusion begins early, in K-12 CS education, and is replicated across the tech ecosystem.

- **K-12 CS Education:** Latine students account for 29% of the nation's high school students, but only 21% of students enrolled in foundational CS courses.
- **Postsecondary Pathways in Computing:** Latine students account for 20% of the nation's students enrolled in postsecondary education, but only 14% of students earning computing degrees.
- **Tech Workforce:** Latine workers comprise 19% of the U.S. workforce, yet they comprise just 5% of leadership roles and 6% of the tech workforce among the largest technology companies.
- **Entrepreneurship & Venture Capital:** Of the \$72.4B in venture capital deployed across the U.S. entrepreneurship ecosystem in 2023, just 1% went to Latine founders.

The ***State of Tech Diversity: The Latine Tech Ecosystem*** report synthesizes current data on the representation of Latine people across the technology ecosystem. This data in this report reveal significant disparities affecting Latine populations across one of the fastest-growing, lucrative, and powerful sectors in our economy. The report concludes with urgent and comprehensive solutions needed to create a more equitable technology ecosystem that addresses existing inequality, disrupts the hoarding of employment and economic opportunity by a homogenous workforce and owner class, and reflects the power and perspectives of Latine communities.

¹ The term "Latine" is used throughout the report. See Glossary of Terms in the Appendix for details.

SPOTLIGHT ON LATINAS IN THE TECH ECOSYSTEM

Broadening participation efforts within the tech ecosystem must address the barriers that girls and women within the Latine community face that are often compounded by their unique experiences at the intersection of race/ethnicity and gender. The data support these challenges:

- Only 43% of Latina girls passed the AP CS A or P exam.²
- Of all bachelor's degrees in CS conferred to Latine students, 21% went to Latinas.³
- For every one dollar of salary made by white men in tech, Latinas made \$0.92.⁴
- While the number of Latina leaders in VC have increased 2x, there are only 17 General Partners who identified as Latina across the U.S.⁵

THE LATINE POPULATION ACROSS THE UNITED STATES

According to the most recent [census data](#), Latine people account for 18.7% of the U.S. population and half of the country's population growth. Of all Latine people in the U.S. (see Figure 1), the majority identify as Mexican (59.6%), followed by Puerto Rican (9.3%), Salvadoran (4%), Cuban (3.8%), and Dominican (3.8%). The Latine population is largely concentrated in Puerto Rico, New Mexico, California, and Texas as shown in Figure 2. Given that [California and Texas have both the largest tech workforces in the nation](#) and among the largest concentrations of Latine people, Latine representation across the tech ecosystem should be far larger.

² Source: Data from 2022 [College Board data](#)

³ Source: Data from 2022 [Integrated Postsecondary Education Data System](#) data using student conferment data related to first or second majors.

⁴ Source: Data from [The 2023 State of Wage Inequality in the Tech Industry](#) report by Hired.com.

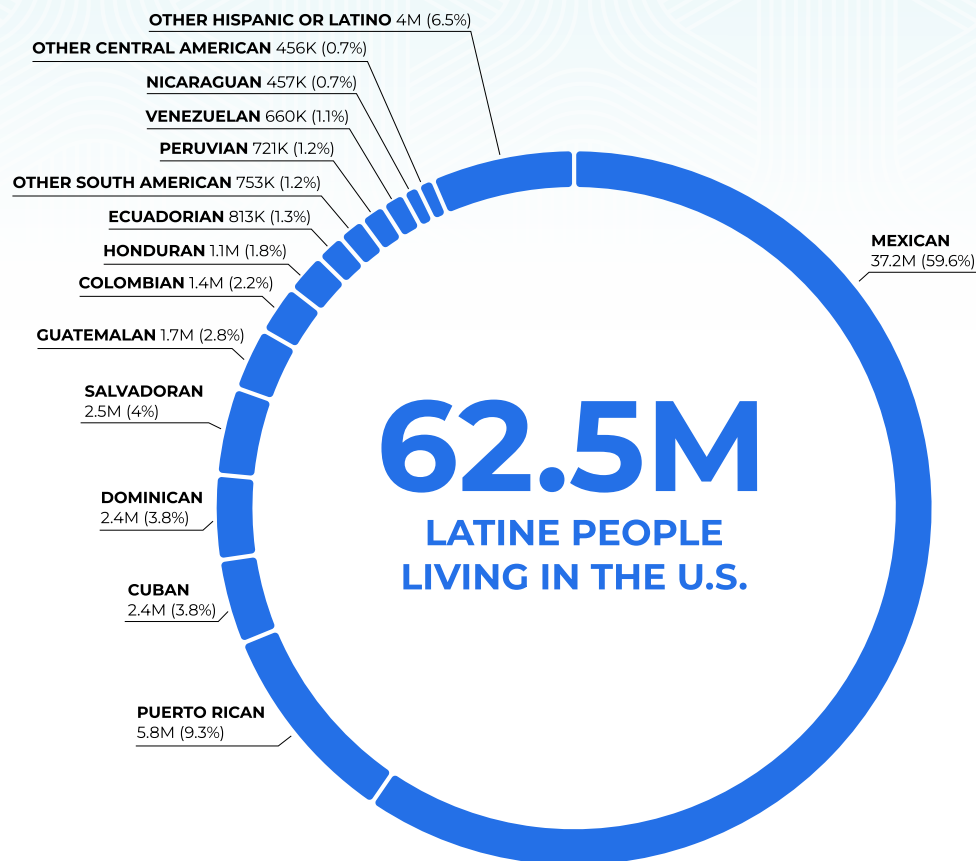
⁵ Source: SomosVC [State of Latino/a VCs Second Annual Report](#) (2023)



DATA TRANSPARENCY ACROSS THE TECH ECOSYSTEM

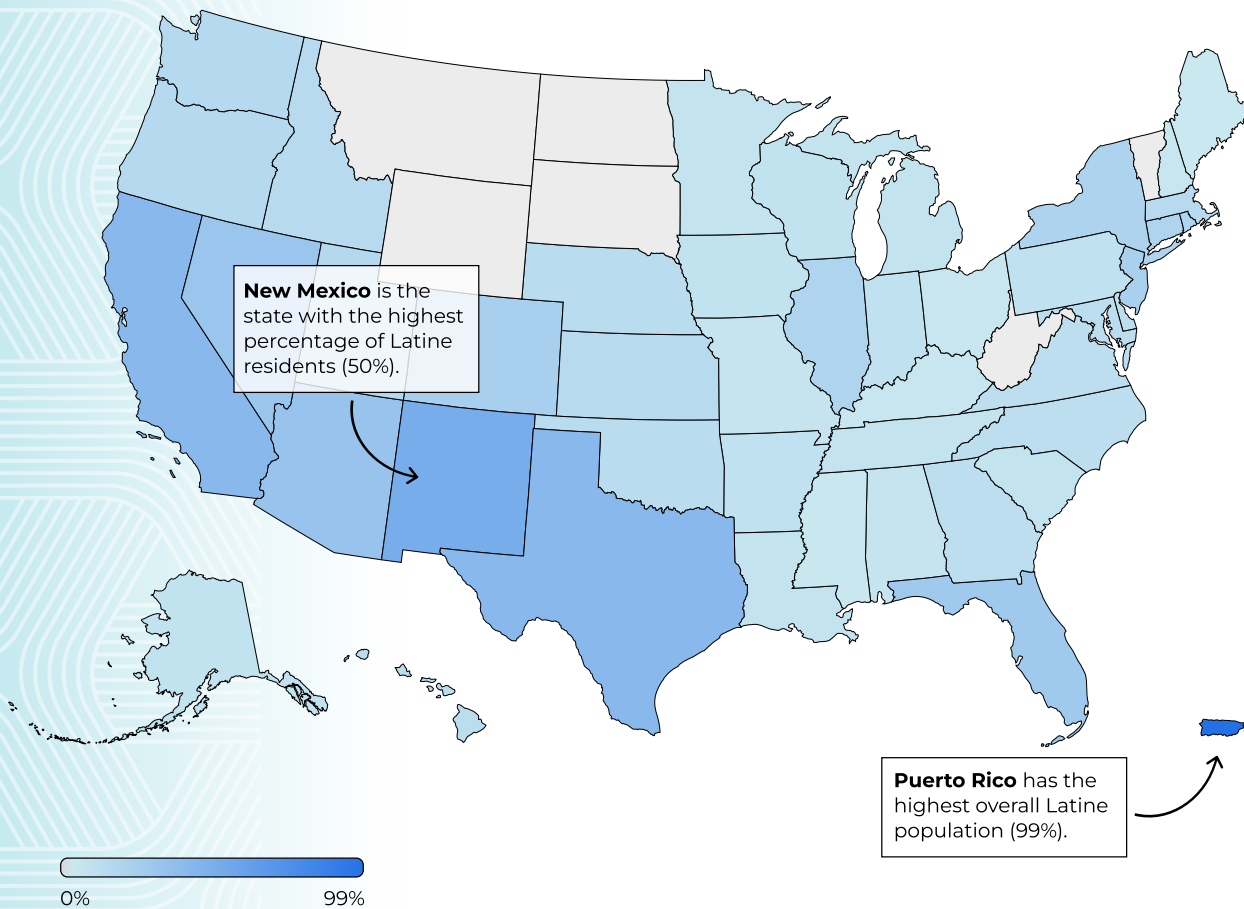
Data accuracy and transparency will be essential to examining tech diversity, revealing disparities, and holding the tech sector accountable. Publicly available data often fail to account for the identities at the intersection of race, ethnicity, and gender within Latine communities. The ability to disaggregate the data by different subgroups, such as men, women, and non-binary individuals who are Afro Latine, Asian Latine, Indigenous Latine, or white Latine, can provide insight into inequities within Latine communities that must also be addressed. Data should include a specific breakdown of Latine representation and should be compared to overall trends as well as geographic-specific, industry-specific, and role-specific demographics.

FIGURE 1. Regions/Countries of Origin for Latine Population in the United States and its Territories (2021)



Source: Data from U.S. Census Bureau, [2021 American Community Survey 1-Year Estimates](#)

FIGURE 2. The Latine Population Percentage in Each State/Territory



Source: Data from U.S. Census Bureau, [2021 American Community Survey 1-Year Estimates](#)

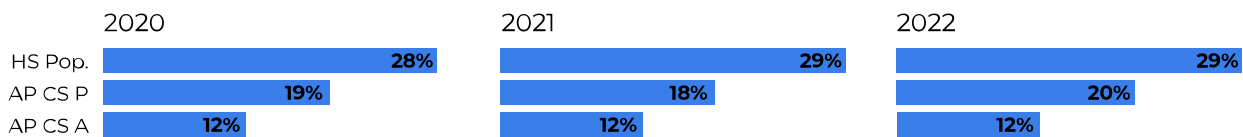
K-12 COMPUTER SCIENCE EDUCATION

All students must be equipped with 21st century skills like logic and reasoning, and develop the skills necessary to be competent users, evaluators, and creators of technology; consequently, CS education is foundational to college- and career-readiness and to thriving in a tech-driven world. It is essential to provide and sufficiently resource high-quality CS for all students across K-12 public education. And yet, significant challenges exist for Latine students, ranging from inequitable access to [high speed internet](#) and high-quality CS courses (i.e., those with culturally-competent instruction and culturally-relevant curricular materials), to a shortage of trained educators, and a [limited network](#) of racially and ethnically-aligned role models.

Despite the research identifying that [greater and earlier exposure to computing experiences lead to a greater likelihood of remaining on a CS pathway](#), there are access and opportunity gaps. More white and Asian students than Latine students are provided [access to foundational CS courses](#). Only 78% of Latine students have access to foundational CS compared to 82% of white students and 89% of Asian students. Even with access, participation remains a challenge among Latine students in both foundational and advanced CS courses.

Despite comprising 29% of the high school student population, Latine students comprise just 21% of students in foundational CS courses and 20% of students in AP CS A. The AP CS Principles course (AP CS P) was developed with the intention of broadening participation, yet Latine students also remain underrepresented (20%) in this course as well. See Figure 3.

FIGURE 3. Overall High School Population In Comparison to Participation Rates in Advanced Placement Computer Science Principles and Advanced Placement Computer Science A of Latine Students (2020-2022)



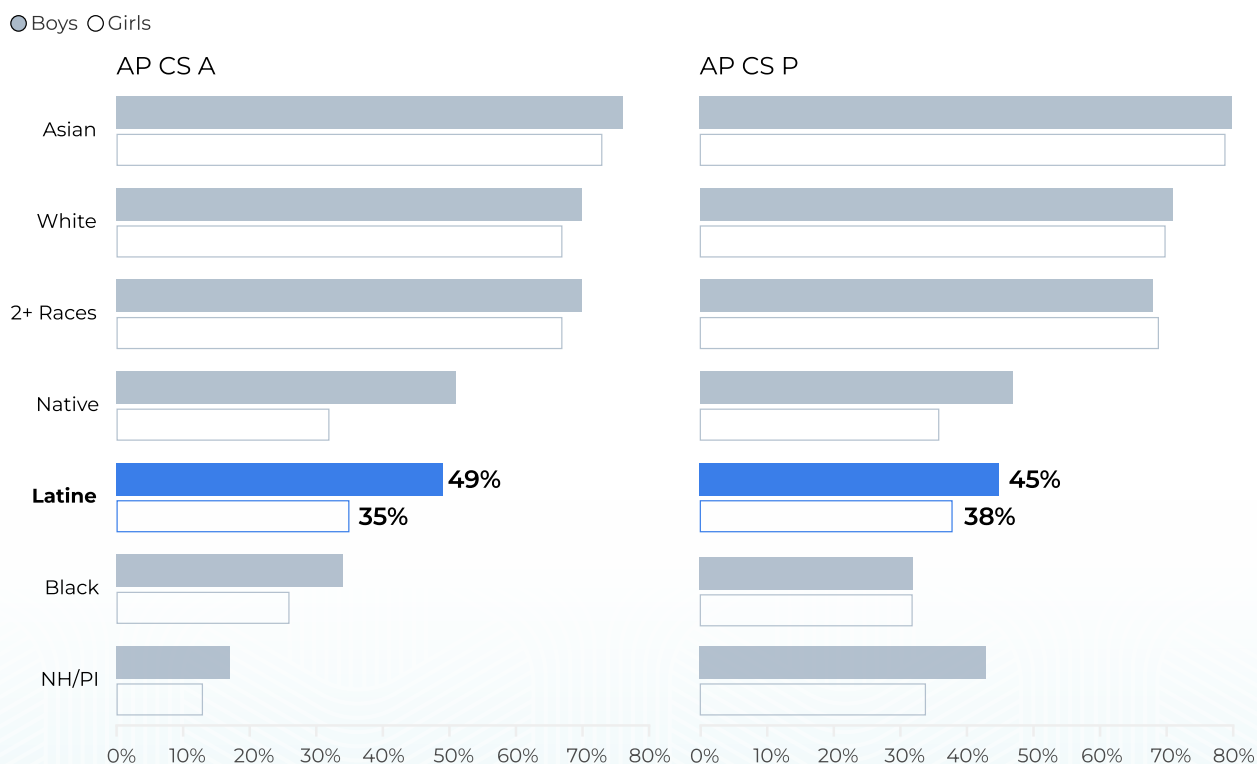
Source: Data from [2020-2022 College Board data](#) and [NCES Digest of Education Statistics](#)

Students must have access to courses, the ability to participate in courses, and the learning experiences to be successful to experience equity in computer science education. Although broadening participation efforts have primarily utilized metrics of *access* and *participation* in CS courses as indicators of the efforts’ progress, it is critical to examine course *success* metrics as well. For example, AP passage rate data have shown significant equity gaps. Less than half of Latine students pass AP CS exams, with an even greater gap existing for Latina girls (see Figure 4). The comparable low passing rates for Latine students within both AP CS A and AP CS P highlight a disconnect between the goal of course development (i.e., closing equity gaps through an introductory CS course to AP CS A) and the current classroom reality.

As broadening participation efforts continue to make slow and incremental gains despite [student and parent interest](#) in CS and technology, intervention strategies can no longer focus solely on racialized myths about the lack of student interest or aptitude in computing disciplines. Rather, systemic changes must be implemented to impact meaningful participation among Latine students – by addressing failures such as the absence of: early, repeated, and high-quality exposure to CS; culturally-relevant CS curricula; culturally-competent educators; a diverse and supported CS teacher workforce; resources and material to implement effective CS; and adequate engagement and recruitment strategies.

An additional structural barrier impeding the full participation of Latine students is schools’ inability to meet the [computing education needs of dual language students](#). Approximately 10% of students in the U.S. are English Language Learners (ELL), with Spanish language speakers making up three-quarters of the ELL population. Yet, only 6% of ELL students participate in foundational CS courses. Equipping the teacher workforce with resources to implement bilingual and [universally designed](#) learning modalities will be required to meet this need within Latine communities.

FIGURE 4. Advanced Placement Exam Passing Rates in Advanced Placement Computer Science A and Advanced Placement Computer Science Principles, by Race/Ethnicity and Gender (2022)



*Note: AP CS data also include an additional category of “No race/ethnicity specified” not noted above.

Source: Data from [2022 College Board data](#)

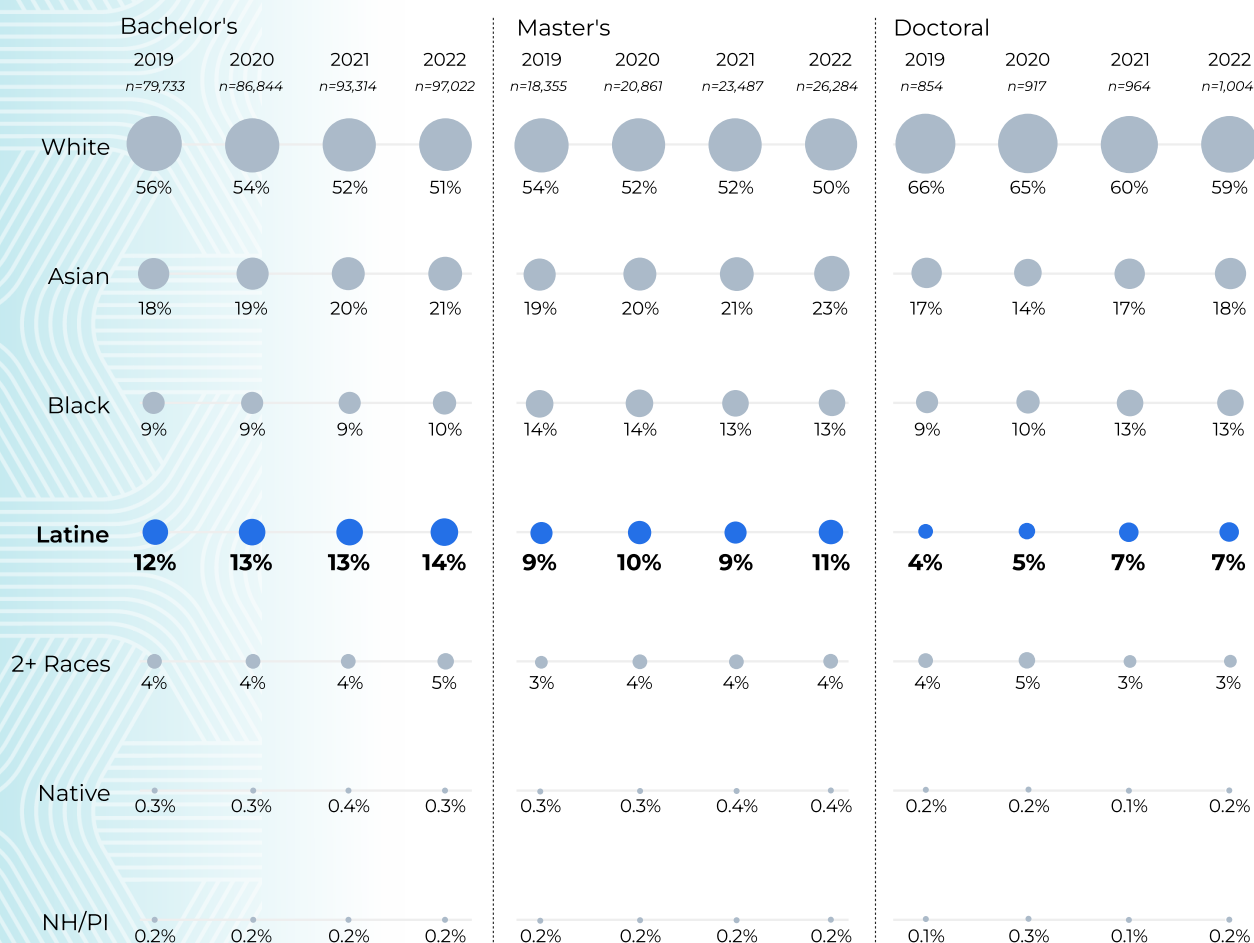
POSTSECONDARY PATHWAYS IN COMPUTING

To support in the development of a skilled and diverse future technological workforce, policies and practices must change not only at the K-12 level but also in postsecondary computing pathways. The lack of action and accountability in institutions of higher education to eliminate gatekeeping practices, expand computing faculty diversity, and implement inclusive curriculum will continue to impact the development of robust and diverse computing education pathways. Furthermore, the expected upskilling and reskilling that will be required of the current workforce to transition into 21st century tech-enabled roles requires alternative pathways to be sufficiently resourced, scalable, sustainable, and regulated.

The Role of Traditional Postsecondary Institutions in Building Computing Pathways

Despite making up 17% of bachelor's degrees conferred across all majors, Latine students comprise only 13% of bachelor's degrees conferred in computing. Similar disparities are seen across graduate degrees in which Latine students comprise 9% of master's degrees conferred and 7% of doctoral degrees conferred (in comparison to 13% and 10% across all fields, respectively). See Figure 5 for degree data between 2019 and 2022.

FIGURE 5. Race/Ethnicity Representation among Bachelor's, Master's, and Doctoral Degrees Conferred in Computing (2019-2022)



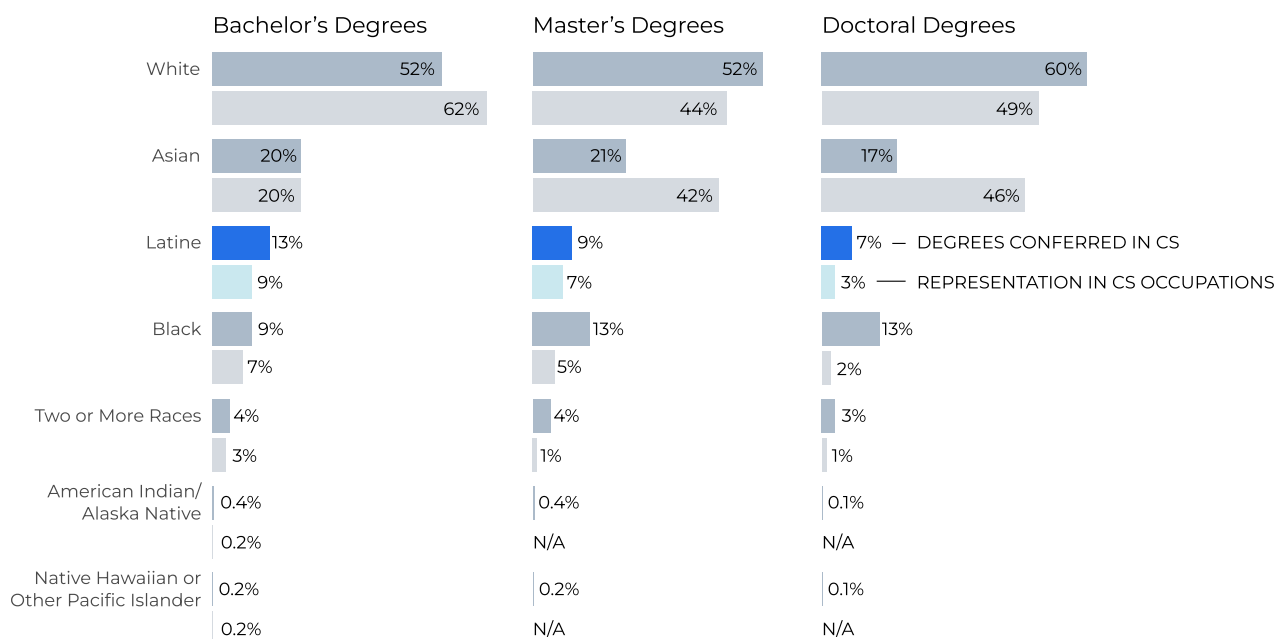
*Note: While data are collected on both race and ethnicity in IPEDS, system reporting is limited in that those who identify as “Hispanic or Latino” are solely categorized as such regardless of race. In addition to the categories above, additional degrees were conferred to non-residents and people with race/ethnicity unknown. The calculations included all universities in the U.S., American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Marianas, Palau, Puerto Rico, and the Virgin Islands.

Source: Data from 2019-2022 [Integrated Postsecondary Education Data System](#) data using student conferment data related to first or second majors.

Latine college degree earners represent 9% of the math and computer scientists in the field, even though Latine students are 13% of those who receive a bachelor's degree in CS. In fact, the gap between CS bachelor's degree earned and representation as math and computer scientists is wider among Latine individuals than any other racial group. Latine students' experiences in STEM education may shed light on the causes of disparities in the rates of persistence in the computing fields.

Among [college-educated STEM workers](#), Latine (43%) and Black workers (45%) are more likely than white workers (30%) to report being subjected to some form of mistreatment or microaggressions in their STEM education experiences. Encountering disparaging comments about one's race or ethnicity, being questioned about whether they belong, and being treated as less competent can have a sizable impact on students' likelihood of continuing into the field. Further, when Latine adults were asked about [how welcoming various STEM professional groups were towards Latine professionals](#), perceptions of scientists rated among the lowest of all groups. Without addressing the hostility faced by Latine among peers, educators, and professionals in these computing spaces, Latine students' desire to continue on a computing path will wane.

FIGURE 6. Representation of College Degree Earners as Math & Computer Scientists, by Degree and Race/Ethnicity (2021)

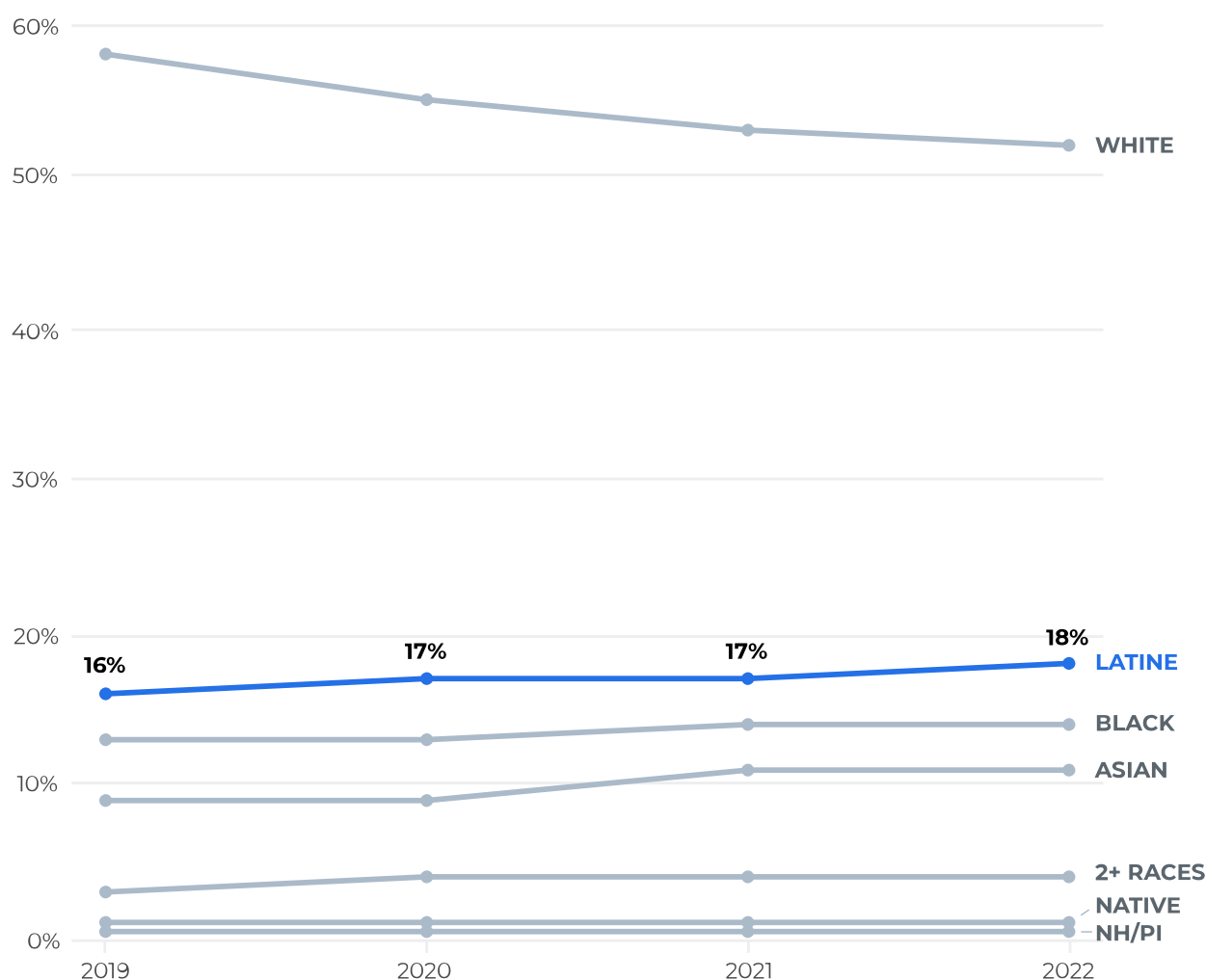


Source: National Center for Science and Engineering Statistics, National Survey of College Graduates (2021) and [Integrated Postsecondary Education Data System](#) data using student conferment data related to first or second majors (2021).

Expanding Computing Pathways Through Two-Year Institutions

Two-year institutions serve almost half (45%) of the Latine students in postsecondary education and are responsible for almost one-third of all computing degrees (either associate's or bachelor's degree) conferred to Latine students. These institutions can be a promising entry point to computing degrees for Latine students, however intentional strategies must be employed to ensure Latine students are recruited and retained in computing. Latine students comprise 18% of associate's degrees conferred in computing in 2022, although they make up a much higher percentage of students earning [associate's degrees](#) overall (26%; see Figure 7).

FIGURE 7. Race/Ethnicity Representation Among Associate's Degrees Conferred in Computing (2018-2022)

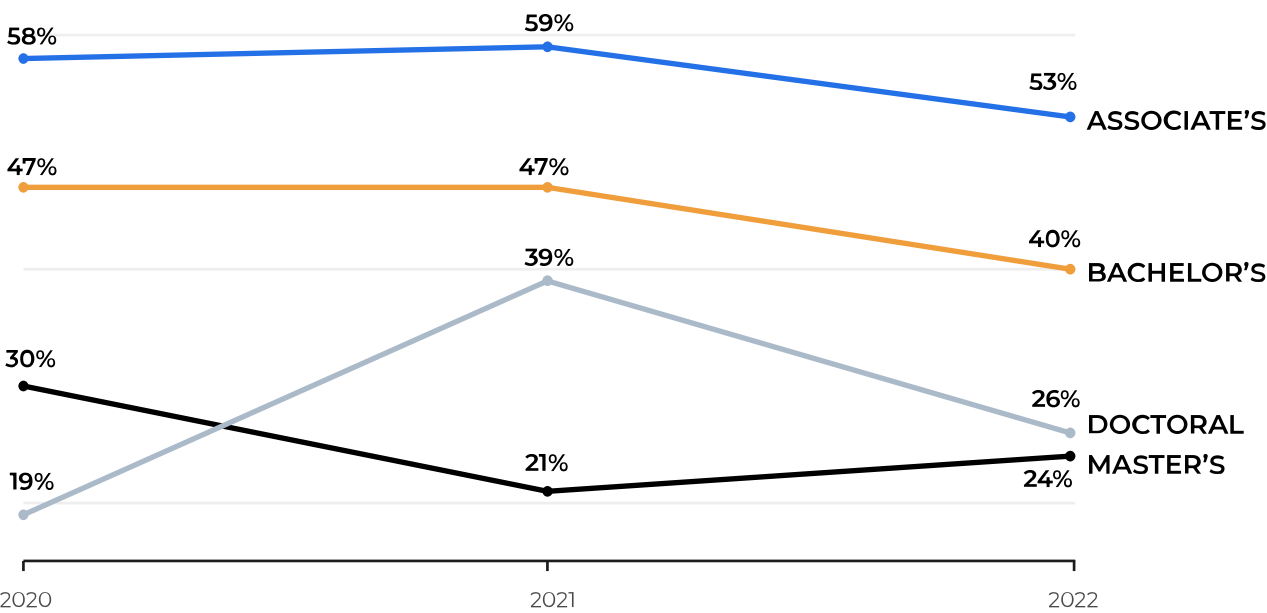


Source: Data from 2018-2022 [Integrated Postsecondary Education Data System](#) data using student conferment data.

The Role of Hispanic-Serving Institutions in Expanding Computing Pathways

While Hispanic-Serving Institutions (HSIs) only represent 16% of all higher education institutions, they [serve 57% of all Latine students](#). HSIs have played an integral role in educating the next generation of Latine computing talent, as shown in Figure 8. In 2022 alone, HSIs were responsible for conferring over half (53%) of CS associate's degrees and 40% of CS bachelor's degrees earned by Latine students. Miami Dade College conferred the largest number of Latine CS associate's degrees as shown in Table 1 and Florida International University conferred the largest number of Latine CS bachelor's degrees among HSIs as shown in Table 2.

FIGURE 8. Latine Representation among Associate's, Bachelor's, Master's, and Doctoral Degrees Conferred in Computing in Hispanic-Serving Institutions as a Proportion of All Computing Degrees (2019-2022)



Source: Data from 2019-2022 [Integrated Postsecondary Education Data System](#) data using student conferment data related to first or second majors.



TABLE 1. Top HSIs Conferring Associate's Degrees in Computing to Latine Students (2022)

College Name	Number of CS Degrees Conferred
Miami Dade College	100
Valencia College	95
Dallas College	93
Austin Community College District	91
South Texas College	86
San Jacinto Community College	73
El Paso Community College	69
CUNY, LaGuardia Community College	62
Long Beach City College	61
Lone Star College System	58
Broward College	57

Source: Data from 2022 [Integrated Postsecondary Education Data System](#) data using student conferment data related to first or second majors.

TABLE 2. Top HSIs Conferring Bachelor's Degrees in Computing to Latine Students (2022)

College Name	Number of CS Degrees Conferred
Florida International University	447
University of Texas at San Antonio	267
University of Central Florida	202
University of Texas at El Paso	141
University of Houston	139
California State University, Los Angeles	114
California State University, Northridge	114
University of Texas, Rio Grande Valley	102
University of Arizona	98
Texas A & M University, College Station	97
Texas State University	97
California State University, San Bernardino	93
University of California, Santa Cruz	90

Source: Data from 2022 [Integrated Postsecondary Education Data System](#) data using student conferment data related to first or second majors.

Upskilling and Reskilling Latine Talent Through Tech Bootcamps

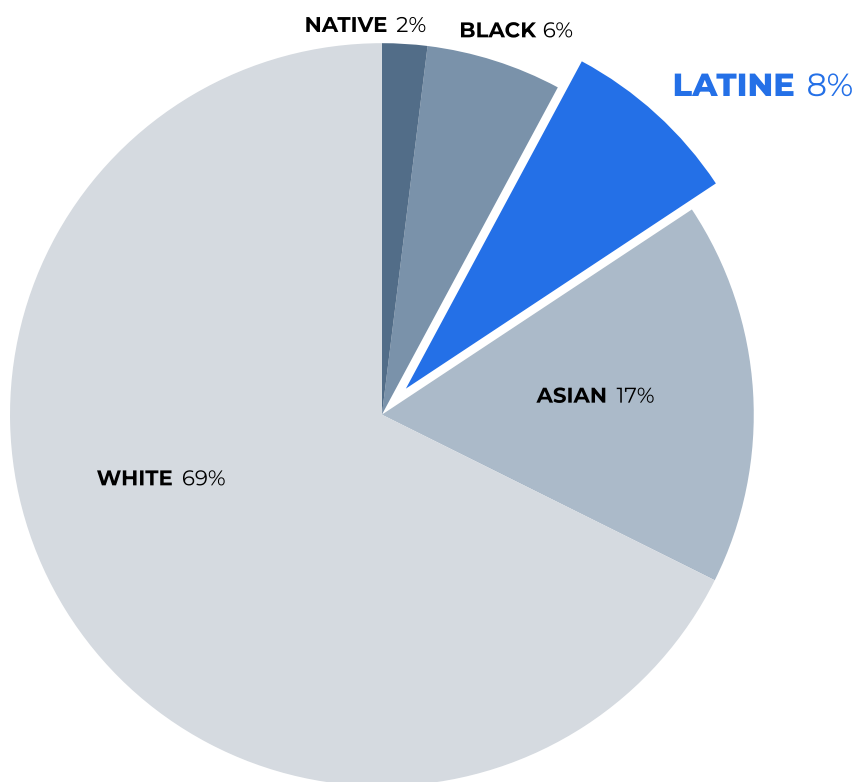
Automation of job functions will require rapidly upskilling and reskilling displaced workers to mitigate the widening of economic inequality. In the six states housing two-thirds of the total Latine population across the U.S. (California, Texas, Florida, New York, Arizona, and Illinois), 40% of the Latine workforce in these states (over 7.1M Latine workers) are [at risk of being displaced by automation](#).

Traditional computing education pathways are no longer sufficient to keep pace with the demand for future tech talent. Based on the adoption of artificial intelligence (AI) and other automation tools that render existing roles obsolete, alternative pathways, such as bootcamps and apprenticeships, can expedite the process of gaining skills and credentials needed to enter the workforce of the future.

Yet, strategic approaches to recruit and retain core groups being impacted by automation must be deployed. While bootcamps were introduced as a faster and more cost-efficient pathway into tech roles such as coding, data science, UX/UI design, cybersecurity, data analytics, and product management, Latine participants are represented at a lower rate than in traditional postsecondary institutions. Thus, both avenues have been unsuccessful at ensuring proportional representation of Latine students and future tech workers. While Latine students comprise 13% of bachelor's degrees conferred, Latine talent represents only 8% of bootcamp participants (see Figure 9). One factor for this disparity may be that although marketed as cost-efficient, at an [average cost of \\$13,500](#), bootcamps that prepare talent for job entry are often still cost-prohibitive to underserved Latine talent.

Even when bootcamp participants enter tech pathways, a lack of awareness about salary expectations and competitive salary ranges have resulted in bootcamp-trained tech talent being [paid 4% less](#) than those entering from traditional pathways.

FIGURE 9. Race/Ethnicity Representation Among Bootcamp Participants (2020)



Source: Eggleston, L. (2021). 2020 Coding Bootcamp Alumni Outcomes & Demographics Report.

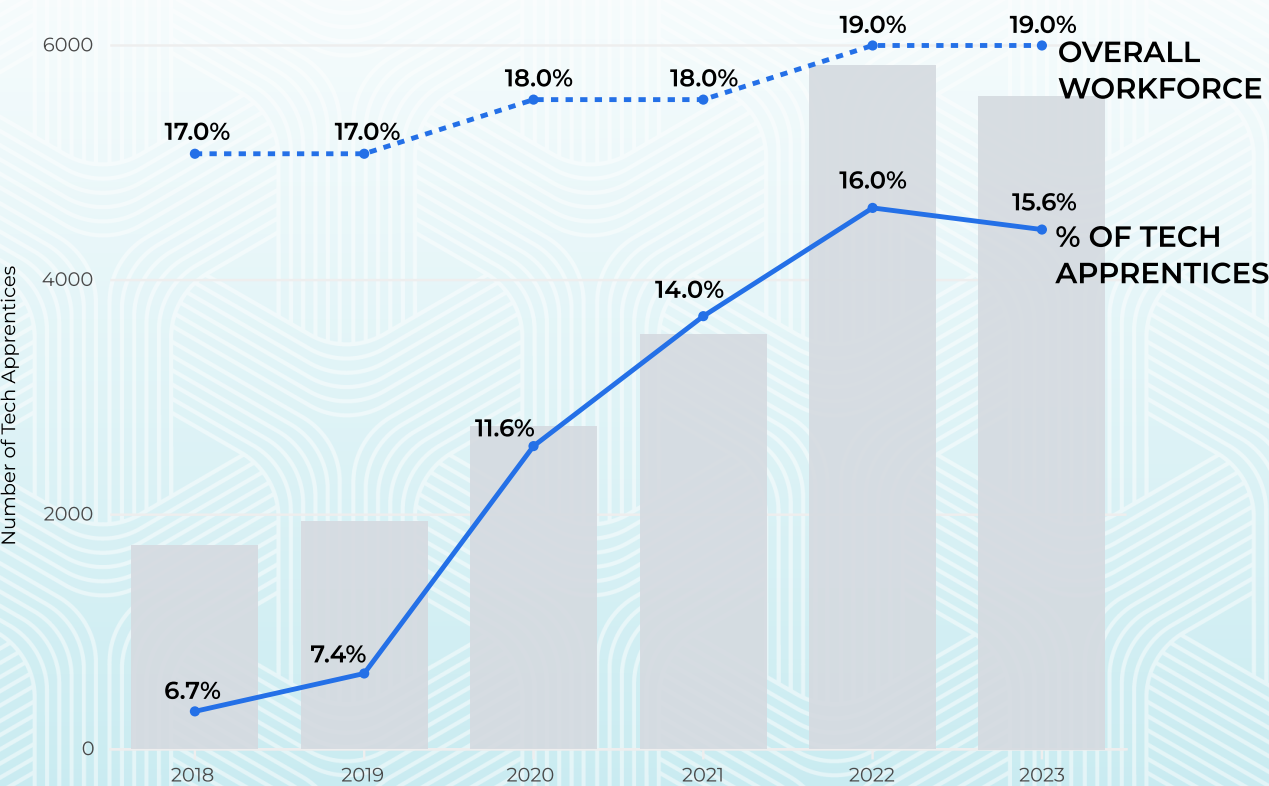


Upskilling and Reskilling Latine Talent Through Tech Apprenticeships

As technology continues to shape the landscape of the workforce, apprenticeships have the potential to bridge the gap to build competencies in the talent pipeline. Apprenticeship opportunities [combine coursework and paid, job-based learning with structured mentorship and clear milestones](#) tied to job conversion. The [number of registered apprenticeships](#) across the U.S. have grown by 25% across all fields within the past 6 years, and the number of registered technical apprenticeships have grown by a staggering 216% in the same timeframe. Currently, 16% of registered tech apprenticeship roles are held by Latine workers (see Figure 10), which is a 133% increase between 2018 and 2023. This trend in representation highlights the promise of apprenticeship models to build the Latine tech talent pool from alternative pathways.

Yet, the recent set of layoffs in the tech sector are predicted to have a [detrimental impact on the apprenticeship model](#). Job posting and hiring rates had already been in decline by the end of 2022 in big tech companies. However, as [registered apprenticeships expand due to the federal government's commitment to high growth sectors such as cybersecurity](#) and [tech-enabled roles grow at non-tech organizations](#), these may yield an alternative tech upskilling and reskilling avenue for the future of apprenticeship roles.

FIGURE 10. Representation of Latine workers in registered tech apprenticeships in comparison to overall workforce (2018-2023)



Categories identified as “Tech” included occupation titles containing: Applications, Cloud Computing, Cybersecurity, Data Science, Database Administration, Information Technology, Networking, Programming, Robotics, and Systems Administration.
Source: Data retrieved in September 2023 from the [Registered Apprenticeship Partners Information Database System \(RAPIDS\)](#).

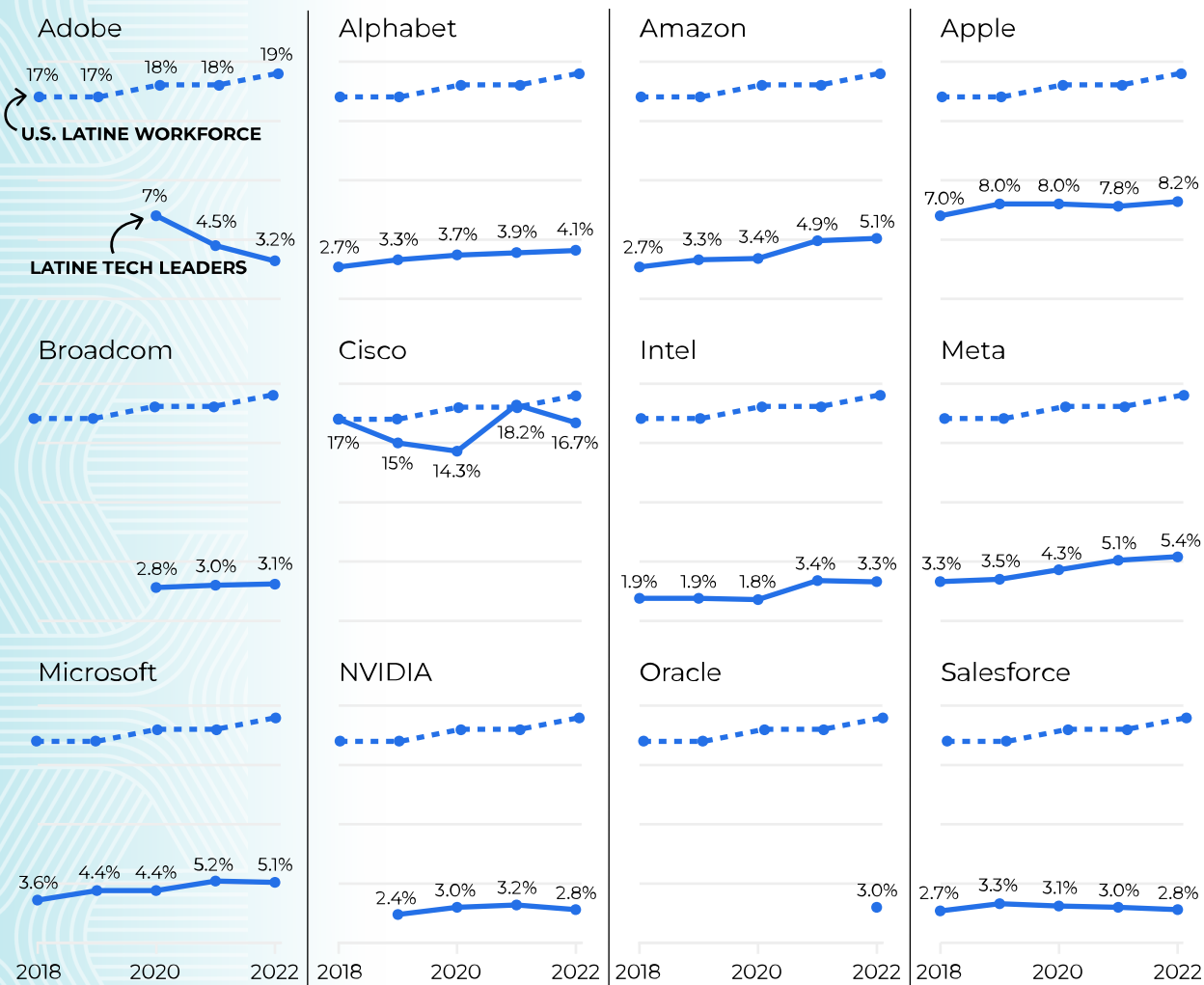


TECH WORKFORCE

The technology sector employs over [9.15M workers](#) and contributes over [\\$1.97T to the United States economy](#). Tech jobs are among the highest-paying, with the median tech wage being \$100,615, 103% higher than the median annual wage across the United States. Yet, despite years of diversity and inclusion efforts, Latine professionals continue to be significantly underrepresented across the technology sector.

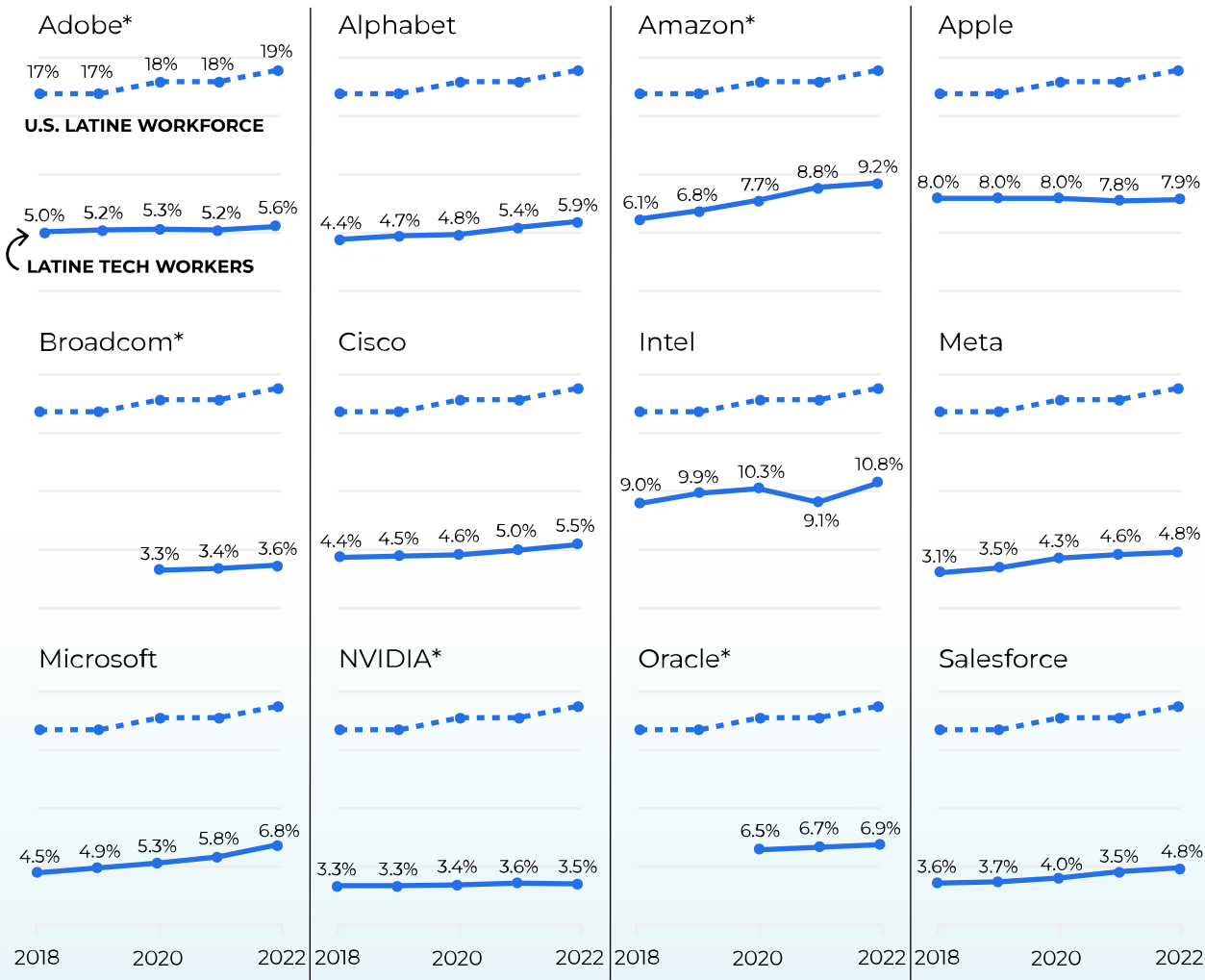
On the heels of the global shutdown due to the COVID-19 pandemic, the brutal murder of George Floyd in May 2020 sparked protests nationally to demand systemic changes to address racial inequities across the U.S. While the public saw virtue signaling by the tech industry to double down on racial equity commitments, the [data reveal the lackluster reality](#). Tracking racial and ethnic representation data between 2018 and 2022 have shown no significant improvements in Latine representation in the tech workforce. Despite comprising 19% of the labor force, Latine talent represents just [3% of tech company board members](#), 5% of executive leadership roles, and 6% of technical roles across the largest U.S.-based tech companies—reflecting underrepresentation across positions (see Figures 11 and 12 for leadership and technical role representation by Latine talent). At the current pace, parity in the representation of the Latine technical workforce would only be reached by the year 2077.

FIGURE 11. Representation of Latine Talent in Leadership Roles in the Largest U.S.-Based Tech Companies by Market Capitalization (2018-2022)



Source: Data from annual company diversity reports. Each of these charts is highlighting the specific company identified in the title and their representation of Latine management professionals in their workforce.

FIGURE 12. Representation of Latine Talent in Technical Roles in the Largest U.S.-Based Tech Companies By Market Capitalization (2018-2022)

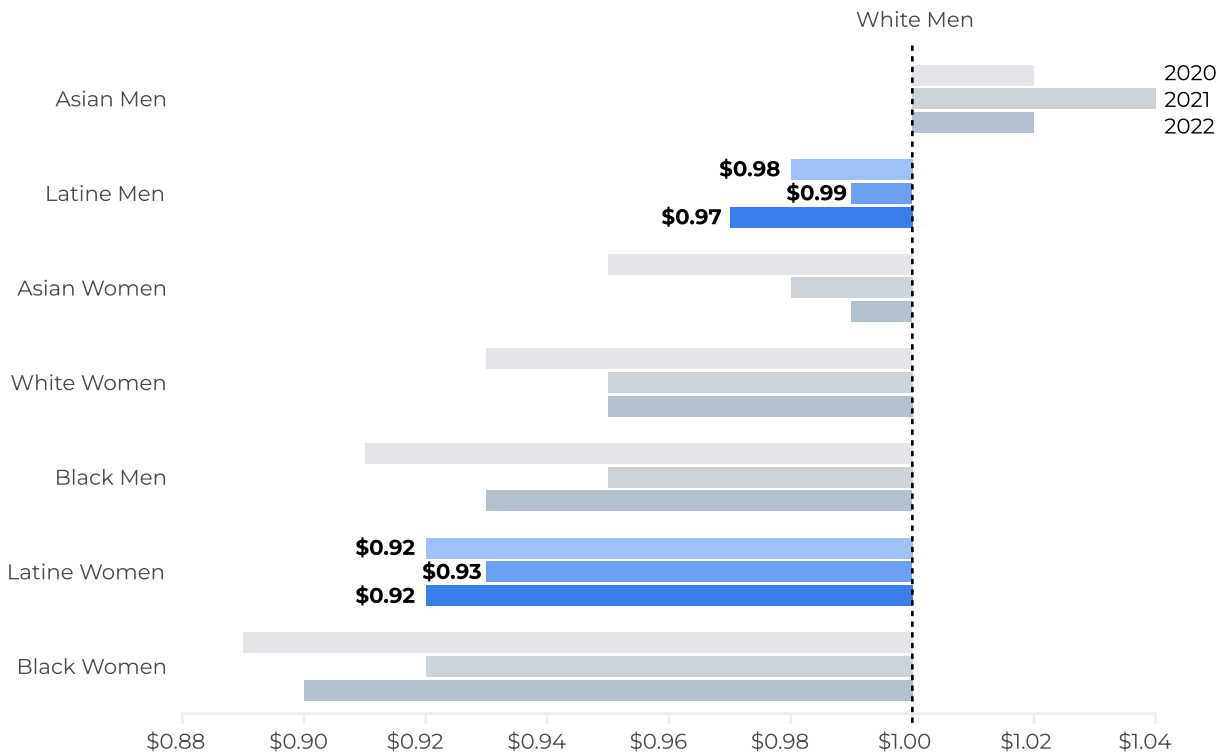


Source: Data from annual company diversity reports. Each of these charts is highlighting the specific company identified in the title and their representation of Latine technical workers in their workforce.

*Note: Adobe, Amazon, Broadcom, NVIDIA, & Oracle do not report on technical role demographics. Amazon numbers represent corporate roles, while Adobe, Broadcom, NVIDIA, & Oracle numbers represent the overall workforce.

As important as recruitment strategies are to ensure Latine talent are entering tech, it will remain equally important to effectively employ strategies to retain Latine talent in their roles. Despite a marginal closing of the wage gap immediately following the racial equity commitments in 2020, the gap has widened for Latine talent two years out. For every one dollar of salary made by white men, Latino men make 3% less and Latina women make 8% less. See Figure 13. Furthermore, the recent economic downturn within the tech industry has disrupted DEIB efforts. [Attrition rates for DEI roles](#) have outpaced those of non-DEI roles and have accelerated quickly. Using role and tenure as [the key factors](#) for laying off workers, diverse hires were significantly impacted since companies were likely to hire talent from historically excluded groups most recently following the 2020 commitments. Data revealed Latine talent has been [disproportionately impacted by layoffs](#), with 11.5% of laid off talent identifying as Latine despite only comprising 10% of the tech workforce.

FIGURE 13. Salary Gaps for Tech Professionals, by Race/Ethnicity and Gender (2020-2022)



Source: Data from [The 2020 State of Wage Inequality](#) report and [The 2023 State of Wage Inequality in the Tech Industry](#) report by Hired.com.

In the first few weeks of 2024 alone, there have been more than [7500 layoffs announced](#) across tech companies, building upon the more than [260,000 layoffs across the tech industry in 2023](#). However, while layoffs across the sector impacting DEIB professionals and Latine professionals have been described as a result of an economic downturn, it must also be noted that these companies have simultaneously made [considerable investments into AI](#) in the last year alone. These shifts in organizational priorities from workforce development and building inclusive workplaces to AI research and development must raise the alarm about companies' sole concern being competitiveness and the financial bottom line to the detriment of inclusion of diverse communities, perspectives, and experiences in the new frontier of technological development.

ENTREPRENEURSHIP AND VENTURE CAPITAL

The tech venture capital and entrepreneurship ecosystem plays a critical role in the creation of current and future technology companies, products, and tools. Venture capital has been historically exclusive and homogenous and the low numbers of entrepreneurs and fund managers from historically-excluded backgrounds is an indicator of the insular context of this space that lends itself to identifying and providing resources to a narrowly defined group of founders –primarily white men. Evidence has shown that a shared ethnicity between founders and venture capital (VC) investment professionals increased the likelihood of investments, increased funding size, and yielded more favorable investment terms, further excluding marginalized groups. Despite data showing that [more diverse VC teams yield better financial returns](#), [Latine representation at VC firms](#) remains at the margins. While the number of [Latine general partners \(GPs\) has increased 5x](#) between 2019 and 2022 (going from 11 to 57 Latine GPs), the overall number of firms and Latine venture capitalists are still not representative of the Latine population nor sufficient to provide investment opportunities through the Latine lens of experience and culture. Latine investors comprise only 6% of total VC investment professionals and only 5% of partner-level VC investment professionals (see Figure 14).

[Of the few Latine VC professionals currently investing](#), many are focused on early stage venture funding. In 2022, 80% of Latine-founded firms focused on seed stage investments (as shown in Figure 15). While the over-indexing in pre-seed to series A fund management by Latine VCs has the potential to identify promising new innovations in the market by a more diverse set of entrepreneurs, late stage investments are more likely to yield wealth creation (as a result of company exits) and increase the collective assets under management. Therefore, Latine-founded VC firms require greater access to capital to deploy into late-stage companies.

FIGURE 14. Latine Representation of Investment Professionals (2018-2022)

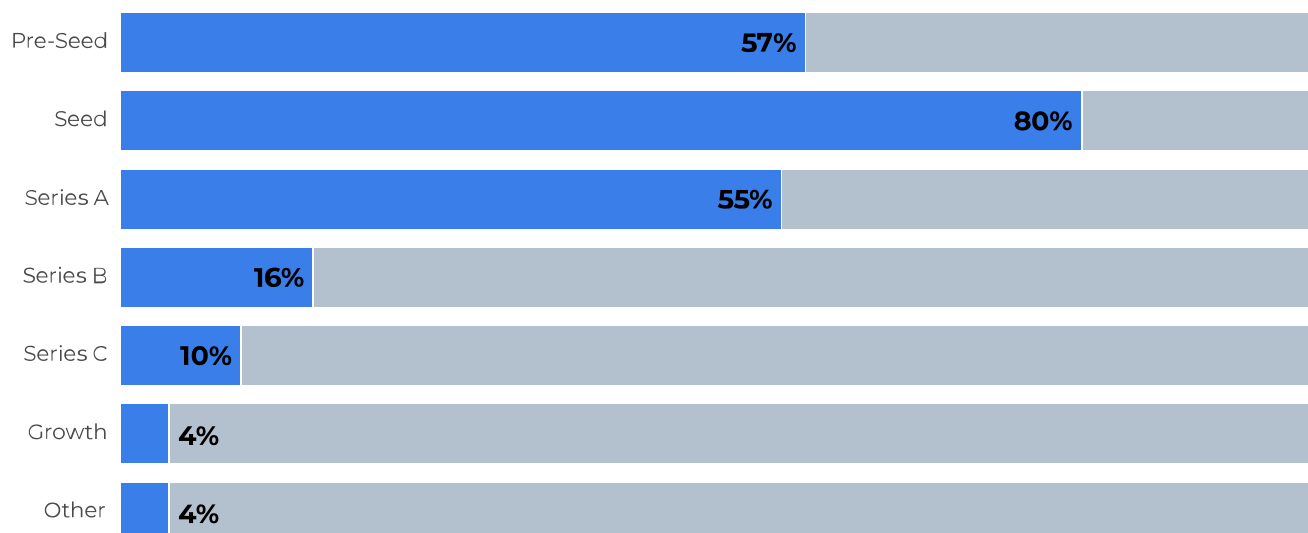


Source: [VC Human Capital Survey](#), fourth edition (2023)

*Note: While this is the most recent data upon completion of this report, soon-to-be published SomosVC data uncovered a total of 172 Latino/a investment professionals in funds with \$100M+ in Assets Under Management (AUM), representing only 1.6% of all investment professionals.



FIGURE 15. Percent of Latine-founded Firms Investing in Each Funding Stage (2022)



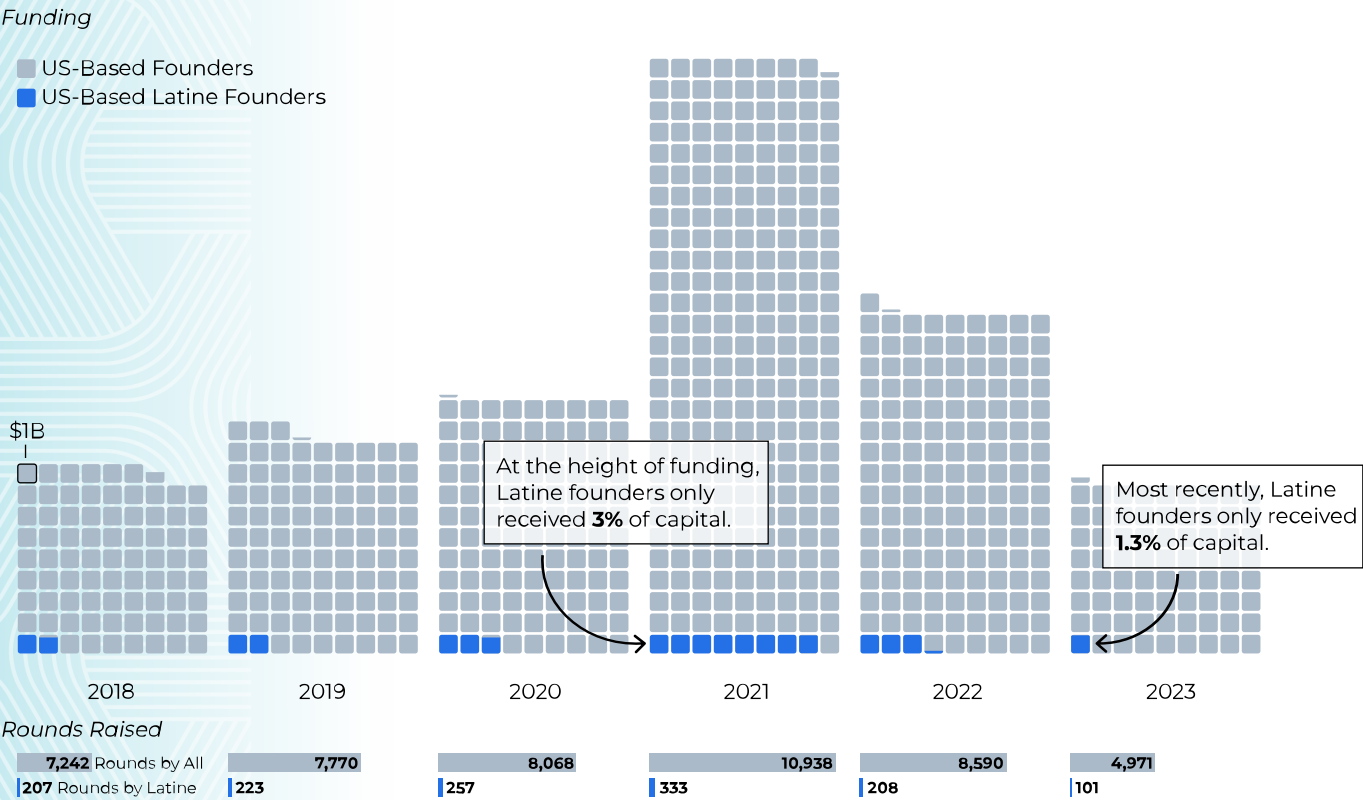
Source: SomosVC [State of Latino/a VCs Second Annual Report](#) (2023)

When current Latine VC investment professionals were interviewed by SomosVC about [experiences that impacted career success](#), the respondents identified an interconnected set of structural barriers that must be addressed to recruit and retain Latine talent in VC, such as more mentorship opportunities, disrupting microaggressions, and eliminating a sense of isolation. While these barriers faced by historically-excluded communities must be eliminated to make progress, initiatives to address these systemic failures continue to [face legal challenges](#).

Unsurprisingly, the lack of representation in the investor space is mirrored in entrepreneurship as well. After a period of exponential growth between 2018 and 2021, the economic downturn impacted the VC industry as evidenced by the decline in total investments between 2021 and 2023 (see Figure 16). While over \$250B in capital was invested in 2021, only \$72.4B was invested in 2023. However, even at the height of venture funding in 2021, just 3% of all venture capital was deployed to Latine founders (see Figure 16). As funding slowed in 2023, Latine entrepreneurs were also hit hard. Just 1.3% of the total venture capital deployed went to U.S.-based Latine entrepreneurs in 2023, through just 101 investments.

As the landscape of tech entrepreneurship continues to evolve rapidly, immediate solutions to include Latine communities as creators and investors in tech innovations are necessary to ensure wealth building in Latine communities while simultaneously ensuring Latine voices are included in shaping a more responsible tech-enabled future. Enhanced cooperation between public and private sectors will play a pivotal role in advancing systemic change in entrepreneurship and venture capital. These efforts must deploy more capital towards Latine founders, channel capital allocation to Latine-led funds focusing beyond early stage, and diversify existing investors.

FIGURE 16. Year-Over-Year Venture Capital Investments, Overall Total and Total Deployed to Latine Entrepreneurs (2018-2023)



Source: Data from Crunchbase accessed November 2023. This analysis included data only from founders who were U.S.-based to account for shifts in the U.S. investment landscape. Investments were filtered for those that were venture-funded from U.S.-based investors (i.e., analyses excluded mergers & acquisitions, private equity, angel) and analyzed the last funding round raised between the time periods noted (vs. total amount raised). Number of total rounds may include companies raising multiple rounds over the time period specified.

CALL TO ACTION

To disrupt the disparities in education, housing, health, and wealth within Latine communities, it is essential to provide equitable opportunities that offer greater physical, psychosocial, and financial security. Further, to create a more inclusive technology ecosystem that harnesses the perspectives and experiences of Latine professionals, expands the horizon of the new technologies that can be created, and ensures the United States remains globally competitive, expanding Latine participation across the tech ecosystem is critical. This section outlines policies and actions that relevant decision makers, including funders, policymakers, industry executives, and educators can implement to support further inclusion of Latine communities across the technology ecosystem.

Recommendations

K-12 CS Education:


- Expand CS education across grades K-12 by integrating CS across subjects, mandating foundational courses and access to advanced CS courses, prioritizing CS as a graduation requirement, and providing funding to do so.
- Incentivize districts to implement culturally relevant and responsive pedagogy and curricula in classrooms.
- Ensure teacher preparation and certification programs equip educators in culturally-responsive and bilingual modalities and with resources in CS for ELL students.
- Adopt pre-service teacher education, professional development, and certification programs that prepare teachers to integrate culturally-responsive curricula and pedagogy and critically analyze ethical issues arising in existing and emerging technologies (e.g., biases in artificial intelligence).
- Recruit more Latine K-12 teachers into the CS educator workforce through targeted recruitment via institutions with high populations of Latine people, such as HSIs.
- Support high speed connectivity and infrastructure investments that expand service options and create new competition that can result in universal coverage, lower prices, faster speeds, and increased reliability across all zip codes.
- Eliminate predatory lending practices and improve affordability of postsecondary pathways

NOTABLE NATIONAL RESOURCES:

- [*CASA Code Toolkit* by UnidosUS](#)
- [*Code as a Second Language \(CSL\) en Español* by Hispanic Heritage Foundation](#)
- [*CSforALL*](#)
- [*Computer Science for English Learners \(CSforEL\)* by the Computer Science Teachers Association \(CSTA\)](#)
- [*DigitalNest*](#)
- [*Latinitas*](#)
- [*Latinos for CS*](#)
- [*Hispanic Federation Latino Digital Accelerator*](#)
- [*National Skills Coalition's Broadband workforce development and digital skills*](#)
- [*SMASH*](#)

Postsecondary Computing Pathways:

- Modernize community college infrastructure to expand CS educational pathways.
- Cultivate partnerships between postsecondary institutions serving high numbers of Latine students (i.e., HSIs and community colleges) and tech companies to ensure opportunities into internships and apprenticeships are available to those student populations to rapidly develop technical skills and ensure workforce readiness.
- Invest in new models for upskilling, reskilling, and hiring to rapidly expand the talent pool for high-demand sectors (e.g., technology, clean energy, advanced manufacturing).
- Incentivize companies (at the federal- and state-levels) to invest in digital upskilling for workers in low- and middle-wage roles, especially for those who are at-risk of unemployment due to automation.



for both traditional and alternative pathways, such as through the [expansion of the Pell grant](#) for short-term workforce development programs.

- [Resource institutions sufficiently](#) to meet the unique needs of Latine people going through community colleges and alternative pathways to ensure retention, such as childcare, transportation, and housing costs.
- Improve transfer processes from 2- to 4-year colleges and universities through strengthening partnerships and recruitment practices between institutions (particularly those serving high proportions of Latine students); support the psychosocial needs of incoming Latine transfer students integrating into new institutions; and eliminate financial barriers to transfer.
- Eliminate arbitrary barriers to the CS major, implement culturally-relevant CS pedagogy, train faculty on evidence-based teaching practices, and improve the climate and culture of computing departments to improve entry and retention in CS majors.
- Address structural issues that continue to create exclusionary computing environments as evidenced by [the homogenous faculty composition](#) in computing departments (i.e., only 3% of newly appointed tenure-tracked CS faculty in 2022 were Latine).

NOTABLE NATIONAL RESOURCES:

- | | |
|---|---|
| • America On Tech | • Accelerator |
| • Aspen Principles for Latino Digital Success | • Sabio.la |
| • Conectado | • Society of Hispanic Professional Engineers |
| • Dev/Mission | • Skilled Through Alternative Routes (STARS), Opportunity at Work |
| • DigitalNest | • Latinas in Cyber |
| • GoSprout Puerto Rico | • Technolochicas |
| • Hispanic Association of Colleges and Universities | |
| • Hispanic Federation Latino Digital | |

Tech Workforce:

- Diversify current recruitment strategies by identifying new outreach opportunities and building partnerships, such as recruiting from HSIs.
- Set explicit goals for recruitment, hiring, promotion, compensation, and organizational culture to ensure Latine representation across all levels of the company, from entry-level to the C-Suite and Board level.
- Create accountability mechanisms once explicit goals are set for increasing representation across the organization.
- Recognize, account for, and understand the data related to compounding equity gaps as a result of intersectional identities.
- Make salary bands and promotion processes transparent across the organization to eliminate discriminatory practices.
- Adopt whistleblower protections, eliminate nondisclosure agreements, allow the ability to unionize, and improve regulatory enforcement to protect workers from harassment and discrimination.

- Allocate financial resources towards professional development, coaching, and mentorship to entry-level professionals to help them advance in their careers.
- Earmark federal funding towards workforce talent development for the future of work, in fields like cybersecurity and AI.
- Develop pathways for established contractors to transition from contracting roles to permanent employment with equitable wages to peers.

NOTABLE NATIONAL RESOURCES:

- [*Aspen Digital Success Initiative*](#)
- [*Association of Latino Professionals for America*](#)
- [*Congressional Hispanic Caucus Institute*](#)
- [*Hispanics in Tech & Telecommunications Policy*](#)
- [*Hispanic IT Executive Council \(HITEC\)*](#)
- [*Latinas in Tech*](#)
- [*Latinas in Cyber*](#)
- [*Latino Donor Collective*](#)
- [*Latinx in AI*](#)
- [*Latinx in Animation*](#)
- [*Latinx in Gaming*](#)
- [*LTX Connect*](#)
- [*Raices Cyber*](#)
- [*SOMOS.tech*](#)
- [*Society of Hispanic Professional Engineers*](#)
- [*Techqueria*](#)
- [*Web3 Familia*](#)

Entrepreneurship and Venture Capital:

- Increase access to capital for Latine-founded venture firms and Latine founders.
- Conduct audits of current recruitment, hiring, promotion, compensation policies and practices, and examine organizational culture to promote Latine representation within venture firms.
- Advocate for public-sector investments in innovation hubs, accelerator programs, and ecosystem-building organizations focused on Latine communities (and co-locating with Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and Tribal Colleges and Universities (TCUs).
- Track venture capital portfolio and firm diversity to ensure accountability towards equitable disbursement of funding to Latine founders.
- Improve transparency and accountability in tracking the diversity of asset managers and investments among college and university endowments, pensions, and venture firms.

NOTABLE NATIONAL RESOURCES:

- [*Aspen Digital Success Initiative*](#)
- [*SomosVC*](#)
- [*VCFamilia*](#)
- [*Angeles Investors*](#)
- [*Department of Treasury's Small Business Capital Formation*](#)
- [*Inicio Ventures, Hispanics in Philanthropy*](#)
- [*Latino Business Action Networks's Startup Accelerator*](#)
- [*StartupUnidos*](#)
- [*Kapor Capital*](#)



CONCLUSION

The continued exclusion of Latine voices and talent from the tech ecosystem is unsustainable. Technological advancement continues to drive our economy and transform the nature of work, and the exclusion of Latine talent from this sector impacts innovation, product development, and economic mobility. The global economy's technological advancement, fueled by AI and machine learning, is set to exponentially increase demand for skilled professionals with a new set of skills. The consequences of inaction in the tech industry are significant for Latine communities, and for the nation as a whole. The moment calls for substantial, long-term investments to both transform the current technology ecosystem and build a more inclusive sector for the future.

SUGGESTED CITATION

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APPENDIX

Glossary of terms

Hispanic-Serving Institutions (HSIs): A Hispanic-Serving Institution (HSI) is defined in Title V of the Higher Education Act as an institution of higher education that is an eligible institution and has an enrollment of undergraduate full-time equivalent students that is at least 25% Hispanic students at the end of the award year immediately preceding the date of application.

Latine: Both “Latinx” and “Latine” came to the mainstream in recent years to shift away from “Latino” or “Latina.” While “Latinx” and “Latine” have both been used to be more gender-inclusive, there has been criticism that “Latinx” does not flow naturally for the Spanish language. For the purpose of this report, “Latine” is used. While the term “Latine” is used consistently throughout this report, data for Latine populations from the census were termed “Hispanic or Latino” in the datasets. The Census Bureau collects these data in accordance with the 1997 Office of Management and Budget (OMB) standards on race and ethnicity in which “Hispanic or Latino” is a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. This disregarding of racial identity vastly flattens [within-group differences and inequities](#). Furthermore, Brazilians are not considered Hispanic or Latino according to the U.S. census because the federal government’s definition applies only to those of “Spanish culture or origin.” In most cases, people who report their Hispanic or Latino ethnicity as Brazilian on the census are later recategorized as not Hispanic or Latino. The same is true for people from Belize, the Philippines, and Portugal. However, an error in the 2020 Census data revealed at least 416,000 Brazilians described themselves as Hispanic or Latino, indicating a need for larger conversations about current categories.



ABOUT US



The **Kapor Foundation** works at the intersection of racial justice and technology by removing barriers in order to make the technology ecosystem more diverse, inclusive, and impactful for communities of color. The Kapor Foundation is a recognized leader in the movement to transform the technology ecosystem by expanding access to computer science education, conducting research on disparities in the technology pipeline, supporting nonprofit organizations and initiatives, and investing in gap-closing startups and entrepreneurs. For more information on the Kapor Foundation and the Kapor family of organizations, SMASH and Kapor Capital, visit www.kaporfoundation.org.



HHF is a national, a 501(c)(3) non-profit organization focused on education, workforce, social impact and culture through the lens of leadership. For more information, visit www.hispanicheritage.org and follow HHF on [Facebook](#), [Instagram](#), [X](#), and [TikTok](#).

SOMOS **SomosVC** is a 501(c)(3) non-profit organization focused on unlocking opportunities for Latino/a VC investors, developing a community that leaves a lasting impact on the ecosystem. Our mission is simple: to accelerate and elevate the presence of Latinos/as in venture capital. When venture investors are empowered to show up as their authentic selves, the flow of capital from limited partners to venture capitalists and ultimately to startup founders becomes more diversified, impactful, and representative of U.S. demographics. For additional information, visit <https://www.somos.vc/>.



The **Congressional Hispanic Caucus Institute (CHCI)** is the premiere nonprofit and nonpartisan 501(c)(3) organization dedicated to developing the next generation of Latino leaders. CHCI brings together an unmatched network of community leaders—along with our top-tier, transformative programming—to build a pipeline of Latino talent ready to shake up local communities, the halls of Congress, and corporate boardrooms. CHCI also convenes young professionals, Members of Congress and other public officials, corporate executives, nonprofit advocates, and thought leaders to discuss issues facing the Latino community and the nation. For more information, visit <https://chci.org/>.