7

Education

Overview

Demand for AI education is growing across every level, but the systems needed to deliver it are still catching up. Computer science enrollment in post-secondary institutions is declining even as AI-related majors gain popularity. Students at both the university and K-12 levels are using AI tools in large numbers, yet access to AI-specific coursework and teacher training remain limited. Governments, including the United States', are pushing to integrate AI literacy into their curricula to maintain their countries' competitive edge. Yet, data on AI education is fragmented and lagging, and much of the analysis in this chapter relies on CS education data as a proxy. To survey the current landscape of AI and CS education, this chapter was prepared in collaboration with the Kapor Foundation, the Computer Science Teachers Association (CSTA), Expanding Computing Education Pathways (ECEP) Alliance, and the AI Index. The Kapor Foundation works at the intersection of racial equity and technology; CSTA is a global membership organization that supports educators in expanding access to CS education, and ECEP is a collective impact alliance focused on broadening participation in computing education.

Contents

Chapter Highlights

1 **CS enrollment fell 11% at U.S. four-year universities between 2024 and 2025, but AI-related graduate programs continued to grow.** Master's graduates in AI software-related fields rose 17% from 2023 to 2024, suggesting continued demand for AI specialization even as CS enrollment cools.

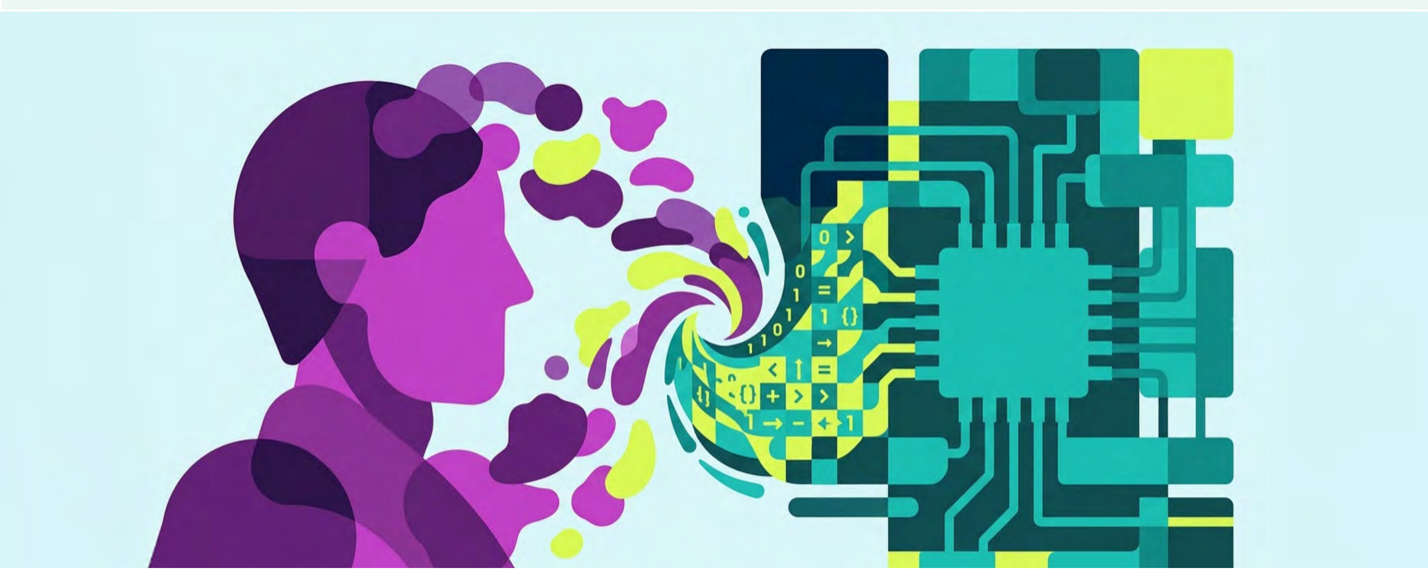
2 **The U.S. remains a global leader in producing information, communications, and technology (ICT) graduates at all degree levels, but other countries are growing faster.** Turkey, Brazil, and Mexico have increased their ICT graduate output more rapidly in recent years.

3 **Four out of five U.S. high school and college students now use AI for schoolwork, but school policies have not kept pace.** Only half of middle and high schools have AI policies, and just 6% of teachers say those policies are clear. Students most commonly use generative AI for research, essay editing, and brainstorming.

4 **More than 90% of countries now offer computer science to primary or secondary students, but AI education has been slower to take hold.** China and the United Arab Emirates both mandated AI education starting with the 2025-26 school year, signaling a shift toward formal AI instruction at the national level.

5 **The number of new AI PhDs in the United States and Canada increased 22% from 2022 to 2024, but the share going to industry has stayed flat.** All of the growth has gone to academia, reversing a decade-long trend of new AI PhDs flowing primarily into industry roles.

6 **People are acquiring AI skills outside formal education, and advertising AI skills in their resumes.** AI literacy has grown faster than engineering-oriented AI skills in most countries. The United Arab Emirates, Chile, and South Africa are exceptions, where engineering skills show steeper growth since 2022.



7.1 Background

AI's role in education is expanding faster than the data needed to track it and much of the data in this chapter is limited in scope, lagging in time, or both. Postsecondary figures reflect completion rates from the 2023–24 academic year and do not yet show enrollment shifts driven by the increasing interest in AI or reported decline in computer science (CS) enrollment. Global data, from the OECD, is only available through 2023 and does not include countries such as India, China, and much of Africa. At the K–12 level, there is little standardized data on AI-related course or program offerings. The metrics that are available are limited to CS education, which is not fully representative of AI education. Given these constraints, a complete assessment of the growing demand for AI education, and how current systems are meeting it, is not possible.

Public discussion about AI in education continues to expand, engaging developers, ed tech vendors, education advocates, policymakers, and educators around the role of AI, with a particular focus on its risks and benefits.[1] There is broad agreement on the importance of AI literacy for all students and its designation as a critical skill for academic, professional, and civic navigation and success. Public discourse often fails to distinguish between AI in education, AI literacy, and AI education (Figure 7.1.1). AI in education is the use of AI to complete teaching and learning tasks. AI literacy refers to the knowledge necessary for a foundational understanding of AI, how it works, how to use it, and the risks of usage. AI education builds on AI literacy with the addition of the technical skills required to build AI systems. Because these terms are often blurred in public discussions, clarity about which topic is being addressed matters for how educators, researchers, and policymakers communicate about AI.

This chapter focuses on AI education and AI in education. Where comprehensive data about AI education is not available, computer science (CS) education data is presented instead.

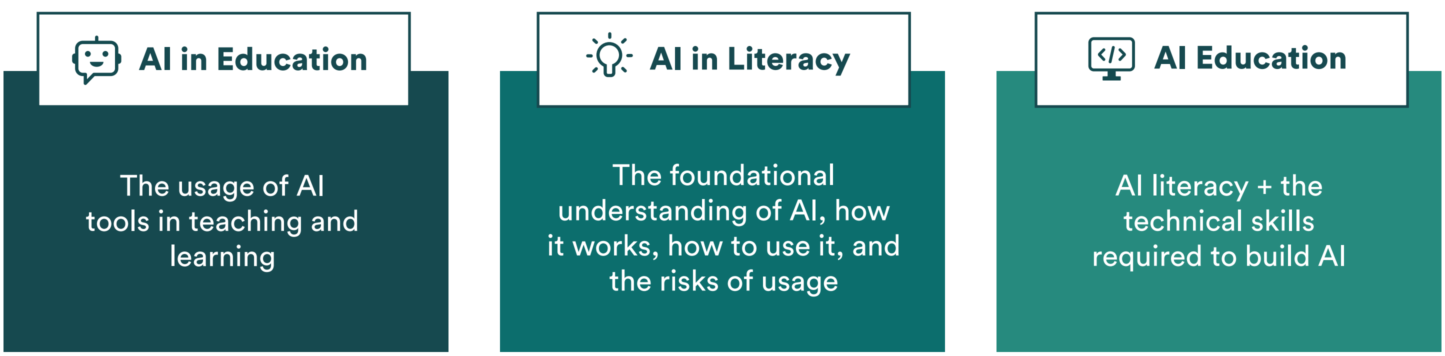
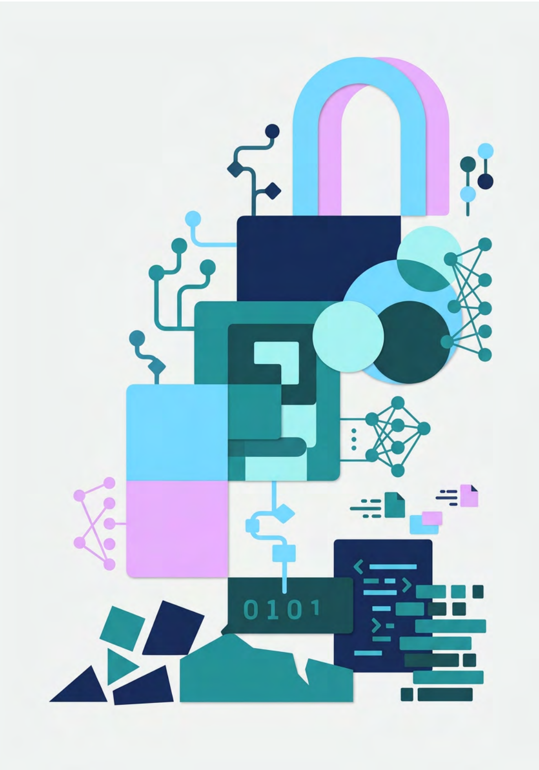


Figure 7.1.1

1 In *A New Direction for Students in an AI World: Prosper, Prepare, Protect*, a January 2026 report from the Center for Universal Education at the Brookings Institution, the authors provide an expansive catalogue of the risks and opportunities related to AI in education. In Annex A, they offer four definitions of "AI literacy" from frameworks published in the last five years.

7.2 Postsecondary CS and AI Education

The generative AI usage among students has reshaped the conversation about the purpose and role of postsecondary education. At the same time, task automation in coding roles has appeared to slow the entry-level job market for CS graduates. These shifts have translated to declines in CS enrollment in postsecondary institutions. Between 2024 and 2025, enrollment in CS as an undergraduate major in four-year universities declined 11%.[2] Chapter 4 (Economy) documents a similar transition in the labor market, where employment among the youngest software developers has declined since 2024 even as overall AI hiring grows. So, students are responding to a shifting job market, but because degree completion lags enrollment by several years, the full effects will take time to appear in the data. Even as CS enrollment declines, there is evidence that AI-related majors are becoming more popular.



U.S. Degree Graduates

Previous versions of the AI Index focused primarily on CS degrees, since very few graduates are classified under an Artificial Intelligence major.[3] This year, the AI Index added AI-relevant majors, as determined by the January 2025 White House AI Talent Report. The report divides AI-relevant majors into two categories: AI software, which includes majors such as Artificial Intelligence, Computer Programming/Programmer, and Computational and Applied Mathematics; and AI hardware, which includes majors such as Electrical and Electronics Engineering, Condensed Matter and Materials Physics, and Industrial Engineering.[4]

AI software-related degrees have steadily increased in popularity over the past 10 years, especially at the bachelor's and master's levels (Figure 7.2.1). The largest increase has been at the master's level, with an 82% increase in graduates between 2022 and 2024 and a 17% increase between 2023 and 2024. The number of AI hardware–related degrees has remained flat or declined; bachelor's degrees, in particular, have declined 13% since reaching a peak in 2020.

2 The declines are based on CS specifically as a major, not the broader category of Computer and Information Sciences and Support Services.

3 The Classification of Instructional Programs (CIP), developed by the National Center for Education Statistics (NCES), designates "Artificial Intelligence and Robotics" under CIP code 11.0102. Despite the availability of this code since 2016, very few schools use it, instead choosing to classify students under 11.0101 (Computer and Information Sciences, General).

4 See the methodology section for a complete list of majors.

New AI-related postsecondary graduates in the United States, 2014–24

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, 2024 | Chart: 2026 AI Index report

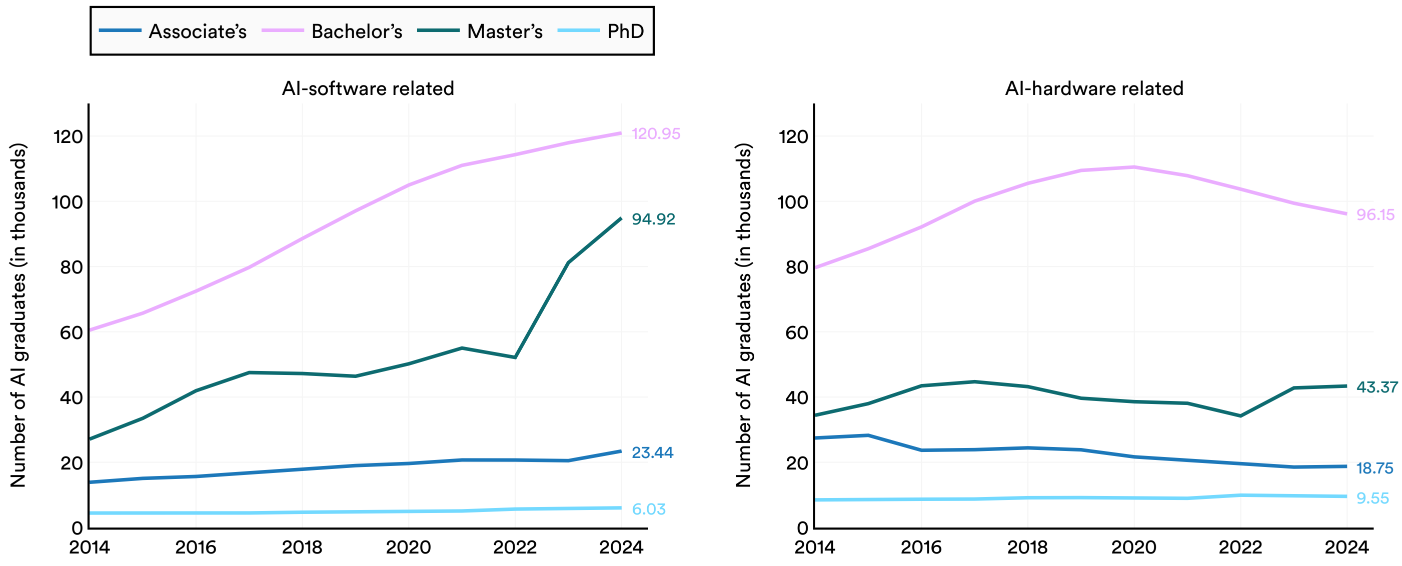


Figure 7.2.1

Women remain underrepresented across AI-related degrees, though they have slightly higher levels of representation in AI software–related degrees than in AI hardware-related degrees, peaking at 36% of AI software–related master's degree graduates (Figure 7.2.2). By comparison, women continue to account for nearly 60% of all degrees.

AI-related postsecondary graduates in the United States by gender, 2024

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, 2024 | Chart: 2026 AI Index report

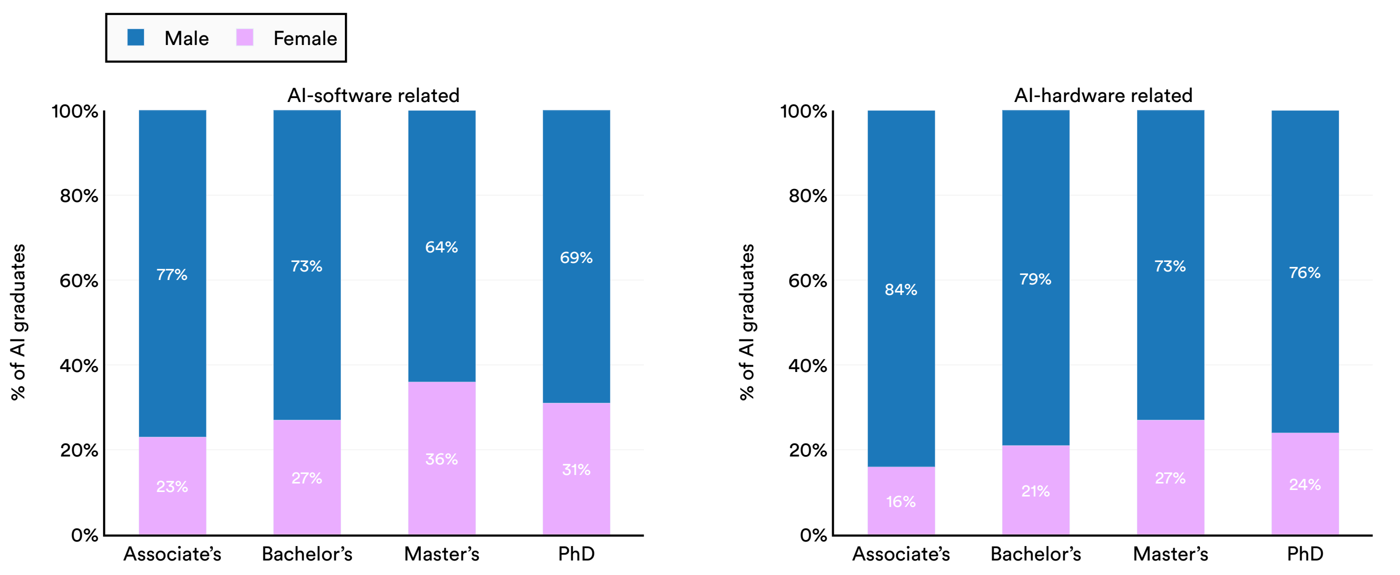


Figure 7.2.2

For AI software–related degrees, Hispanic/Latino, Black, Native Hawaiian/Pacific Islander, and Native American/Alaskan students are underrepresented at all levels (Figure 7.2.3). White students are also underrepresented, though to a lesser degree, except at the PhD level. Multiracial and Asian students are overrepresented, with Asian master's students the most overrepresented.

Representation patterns tend to be consistent across degree levels within each racial group (Figure 7.2.4). The main exceptions are Asian students and Native American/Alaskan students, whose representation varies by degree level. Hispanic/Latino students are slightly underrepresented at all levels, and Native Hawaiian/Pacific Islander and Black students remain underrepresented at all levels.

AI software–related vs. all postsecondary graduates in the United States by race/ethnicity, 2024
Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, 2024 | Chart: 2026 AI Index report

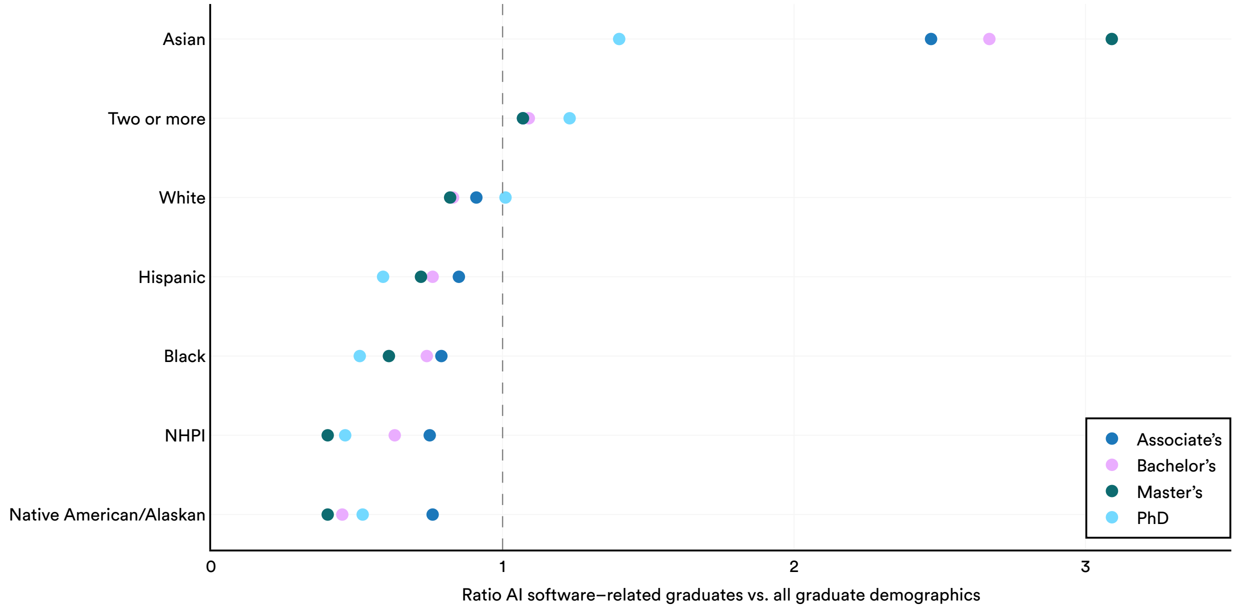


Figure 7.2.3

AI hardware–related vs. all postsecondary graduates in the United States by race/ethnicity, 2024
Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, 2024 | Chart: 2026 AI Index report

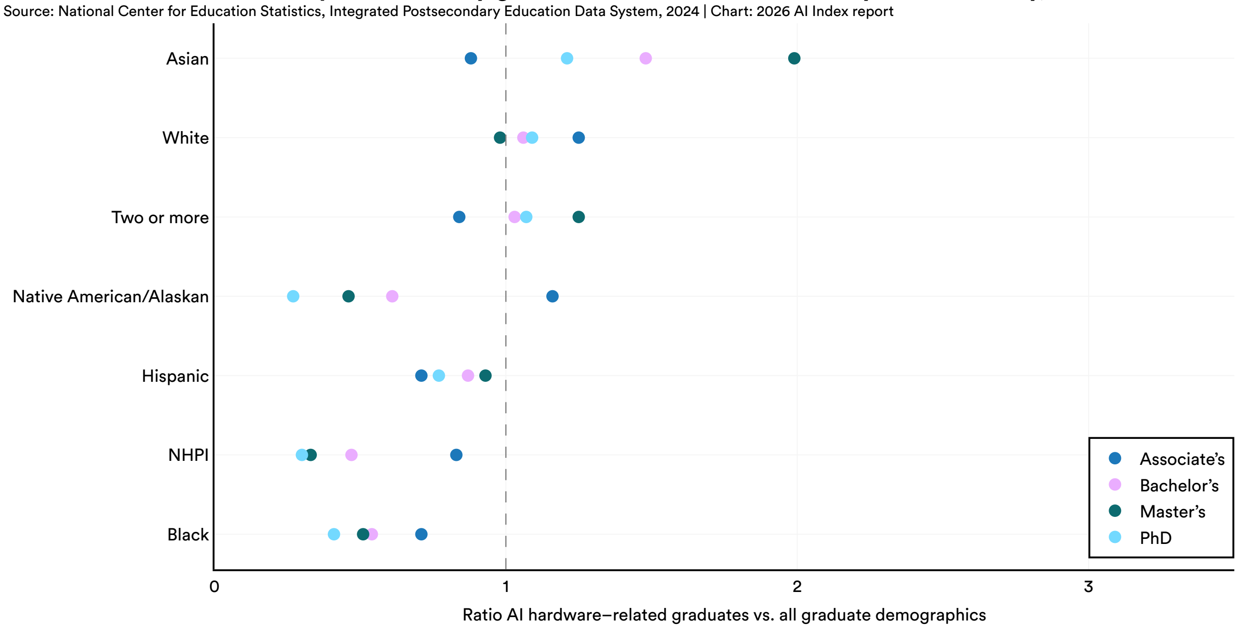


Figure 7.2.4

The majority of AI-related graduate students are non–United States residents, a pattern consistent with previous years' analyses of CS degrees (Figure 7.2.5). This is especially true in AI software–related master's degrees, where 67% of graduates are nonresidents. However, due to the federal government revoking student visas and discouraging international student enrollment, further declines in the number of nonresident graduates are expected in the coming years.

AI-related postsecondary graduates in the United States by residency, 2024

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, 2024 | Chart: 2026 AI Index report

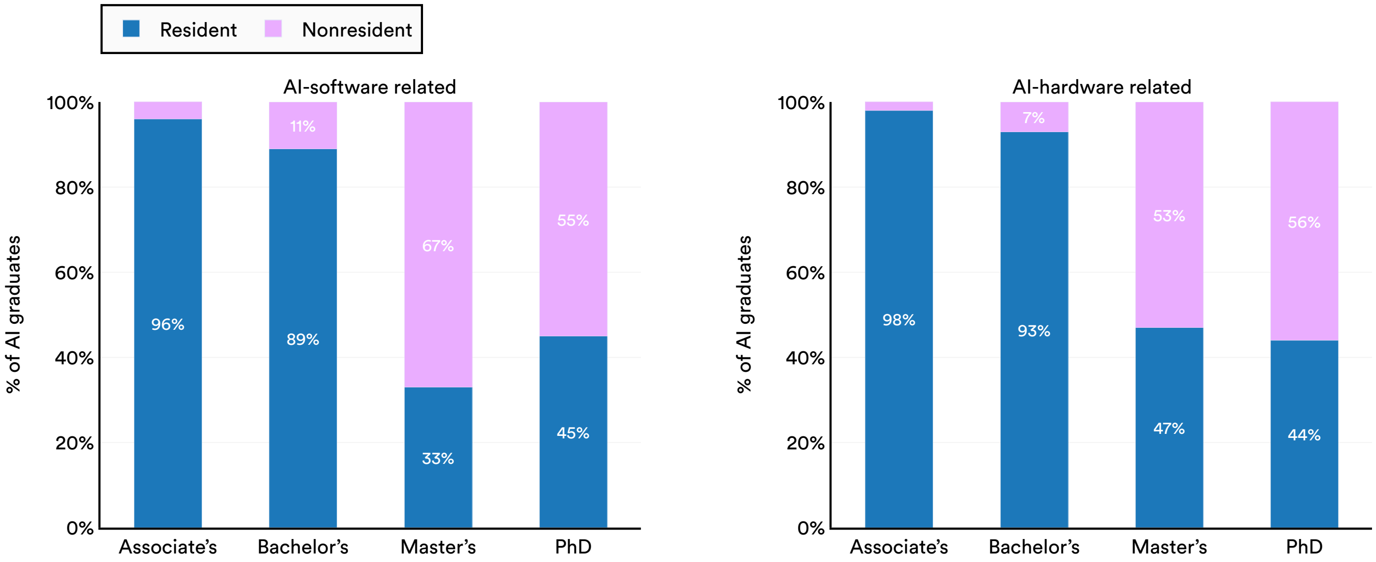


Figure 7.2.5

A range of institutions produce the highest number of graduates in AI-related fields[5], including both public and private universities (Figure 7.2.6). The Georgia Institute of Technology is the only school in the top 10 across all levels for both AI software and hardware–related degrees. Other universities that appear at least once on both lists include University of California, Berkeley (4 mentions); University of Illinois, Urbana-Champaign (4); University of Michigan, Ann Arbor (4); Pennsylvania State University (3); Northeastern University (2); Carnegie Mellon University (2); Massachusetts Institute of Technology (2); and Stanford University (2).As more institutions add AI-specific majors at the undergraduate level, these rankings are likely to shift in coming years.

5 Some institutions classify AI-related graduates under broader program categories rather than AI-specific ones, which may result in undercounting at schools where AI coursework is housed within general computer science or engineering programs.

Top postsecondary institutions graduating students in AI-related degrees, 2024

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, 2024 | Chart: 2026 AI Index report

AI-software related

	Bachelor's	Master's	PhD
1	University of Maryland Global Campus: 2,350	Georgia Institute of Technology: 3,394	Georgia Institute of Technology: 155
2	Western Governors University: 2,029	University of Texas, Dallas: 2,555	Massachusetts Institute of Technology: 154
3	University of California, Berkeley: 1,983	Columbia University: 2,481	University of Illinois, Urbana-Champaign: 128
4	University of Maryland, College Park: 1,877	University of North Texas: 2,454	Carnegie Mellon University: 128
5	Southern New Hampshire University: 1,733	Trine University: 2,114	University of Michigan, Ann Arbor: 106
6	University of Michigan, Ann Arbor: 1,723	University of Illinois, Urbana-Champaign: 1,905	University of California, Los Angeles: 105
7	Rutgers University: 1,329	Northeastern University: 1,720	University of California, San Diego: 104
8	Georgia Institute of Technology: 1,302	University of Southern California: 1,676	University of Washington: 104
9	University of California, San Diego: 1,204	University of Texas, Arlington: 1,430	University of California, Berkeley: 103
10	Pennsylvania State University: 1,181	Boston University: 1,360	Stanford University: 95

AI-hardware related

	Bachelor's	Master's	PhD
1	Purdue University: 2,083	Northeastern University: 1,565	Purdue University: 329
2	Texas A&M University: 1,857	Arizona State University: 1,090	University of Michigan, Ann Arbor: 242
3	Georgia Institute of Technology: 1,400	New York University: 959	Stanford University: 202

4	University of Illinois, Urbana-Champaign: 1,391	University of Michigan, Ann Arbor: 941	Georgia Institute of Technology: 198
5	Ohio State University: 1,341	Johns Hopkins University: 939	Massachusetts Institute of Technology: 191
6	Virginia Polytechnic Institute and State University: 1,039	Carnegie Mellon University: 899	Texas A&M University: 189
7	Pennsylvania State University: 1,002	Georgia Institute of Technology: 839	University of Illinois, Urbana-Champaign: 184
8	University of California, Berkeley: 970	Texas A&M University: 740	University of Texas, Austin: 180
9	Iowa State University: 942	San Jose State University: 737	University of California, Berkeley: 176
10	North Carolina State University: 914	Purdue University: 731	Pennsylvania State University: 160

Figure 7.2.6

AI PhD graduates continue to choose industry jobs and lucrative salaries more often than academic jobs, with 65% going into industry after graduation (Figure 7.2.7). This percentage has declined in the last few years, down from a peak of 77% in 2022. At the same time, the share of academic jobs has increased, nearly doubling since 2022 (Figure 7.2.8). This challenges the narrative that academia is experiencing an exodus of experts or a “brain drain.” The percentage of AI PhD graduates entering government jobs has gradually increased to 2% from a low of 0.7% in 2021.

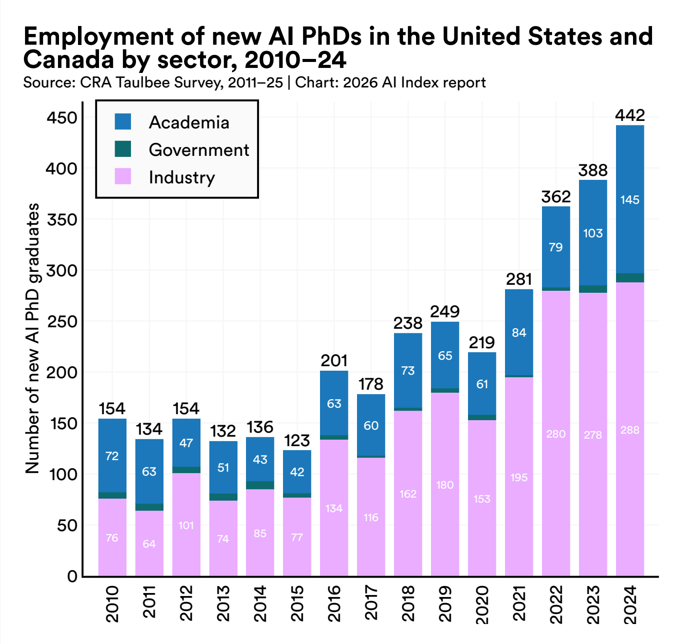


Figure 7.2.7

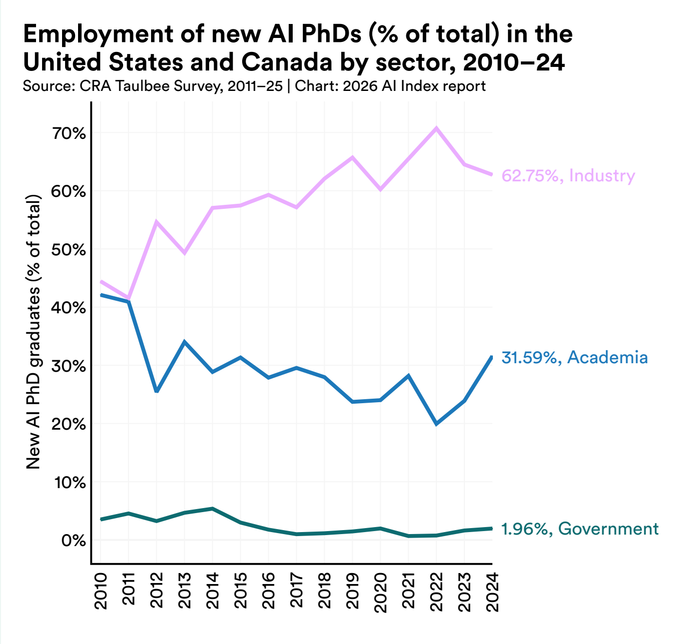


Figure 7.2.8[6]

Global ICT Graduates

No single dataset provides a fully standardized accounting of AI or CS postsecondary education across all countries. The Organization for Economic Cooperation and Development (OECD) has compiled data covering its member countries and several non-OECD nations.[7] The International Standard Classification of Education provides the framework the OECD uses to compare education statistics across countries. Information and communication technologies, or ICT, includes such areas of study as "informatics, information, and communication technologies, or CS. These subjects cover a wide range of topics related to the new technologies used for the processing and transmission of digital information, including computers, computerized networks (including the Internet), microelectronics, multimedia, software, and programming."

The United States remains a global leader in ICT-related fields, producing more graduates at the associate's, bachelor's, master's, and PhD levels than any other country in the sample (Figures 7.2.9 to 7.2.12). At most levels, other countries had faster year-over-year growth than the United States. At the associate's level (denoted in international charts as short-cycle tertiary), Turkey increased its graduates by 27%; at the bachelor's level, both Brazil and Turkey increased their graduates by 30%; and at the PhD level, Mexico increased its graduates by 76%. The exception is at the master's level, where the United States increased its graduates by 55% (though, as noted earlier, many master's graduates in the United States are not U.S. residents).

6 The sums in Figure 7.2.8 do not add up to 100%, as there is a subset of new AI PhDs each year who become self-employed, unemployed, or report an "other" employment status in the CRA survey. These students are not included in the chart.

7 While this dataset provides insights across some country lines, it omits a number of countries likely to have large numbers of ICT graduates. The exclusion of India, China, and countries in Africa highlights the need for global standardized data collection to ensure the inclusion of countries that have made significant investments in computing education and make up a significant proportion of the global population. There is also a notable lag in collecting and reporting global data on education; as a result, the most recent year for which data is available is 2023. Data for each country includes any students who have graduated from an institution in that country, regardless of their nationality.

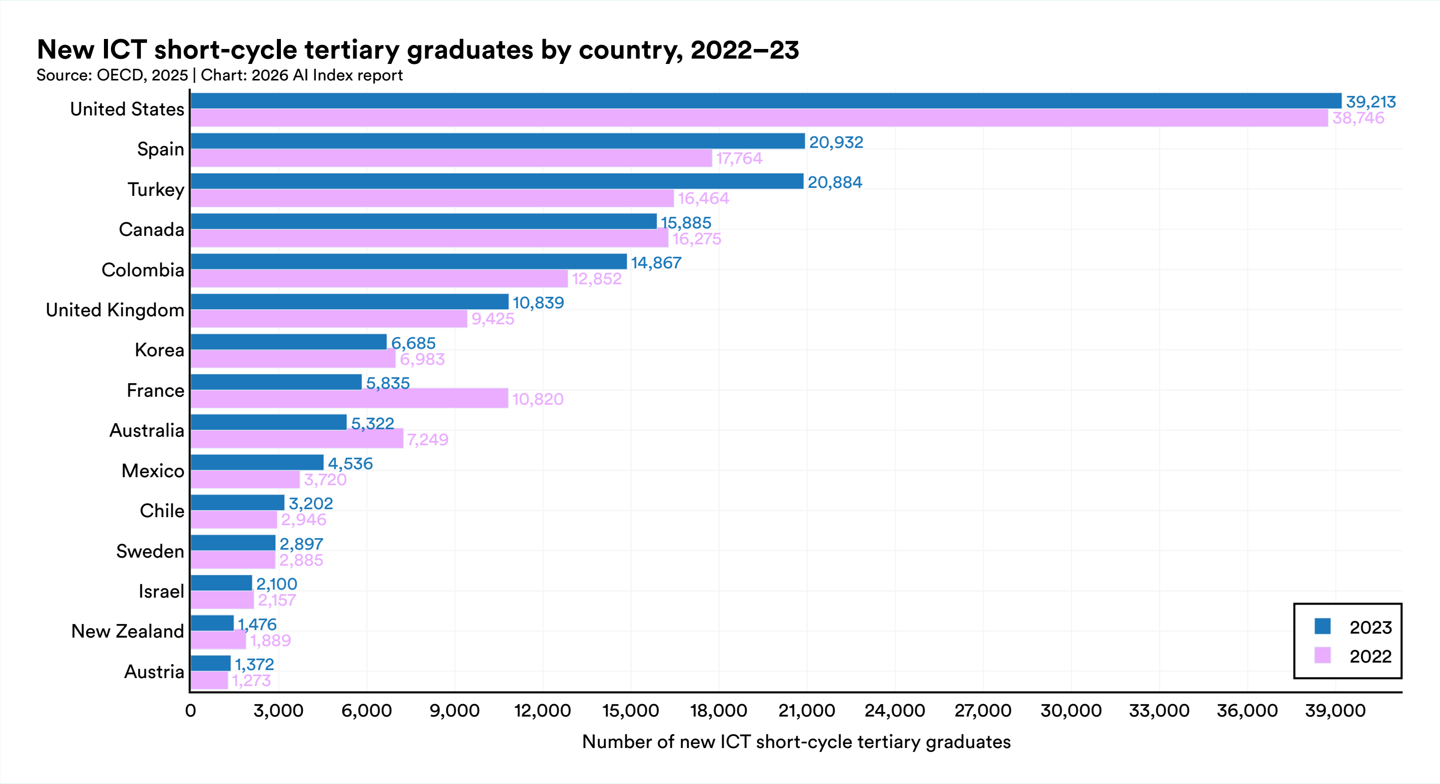


Figure 7.2.9

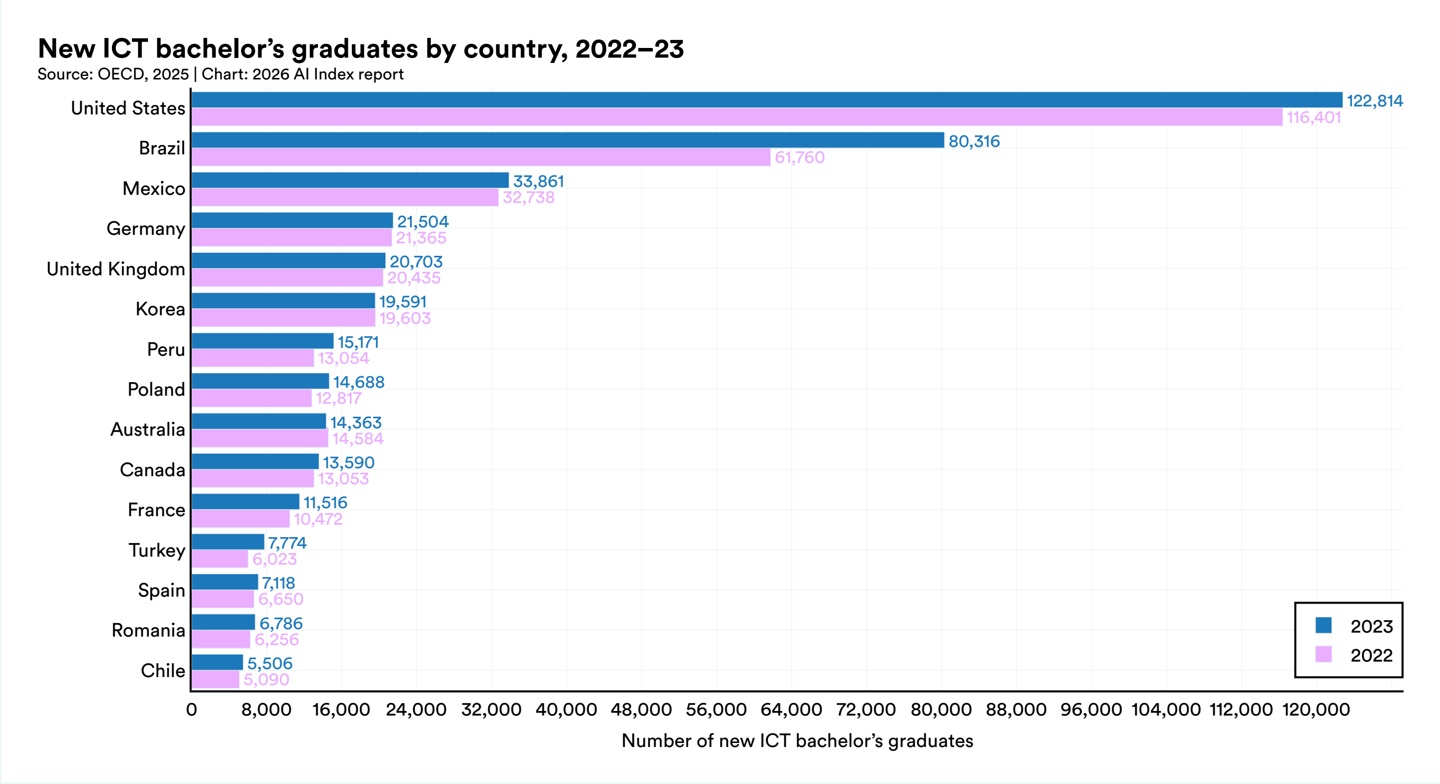


Figure 7.2.10

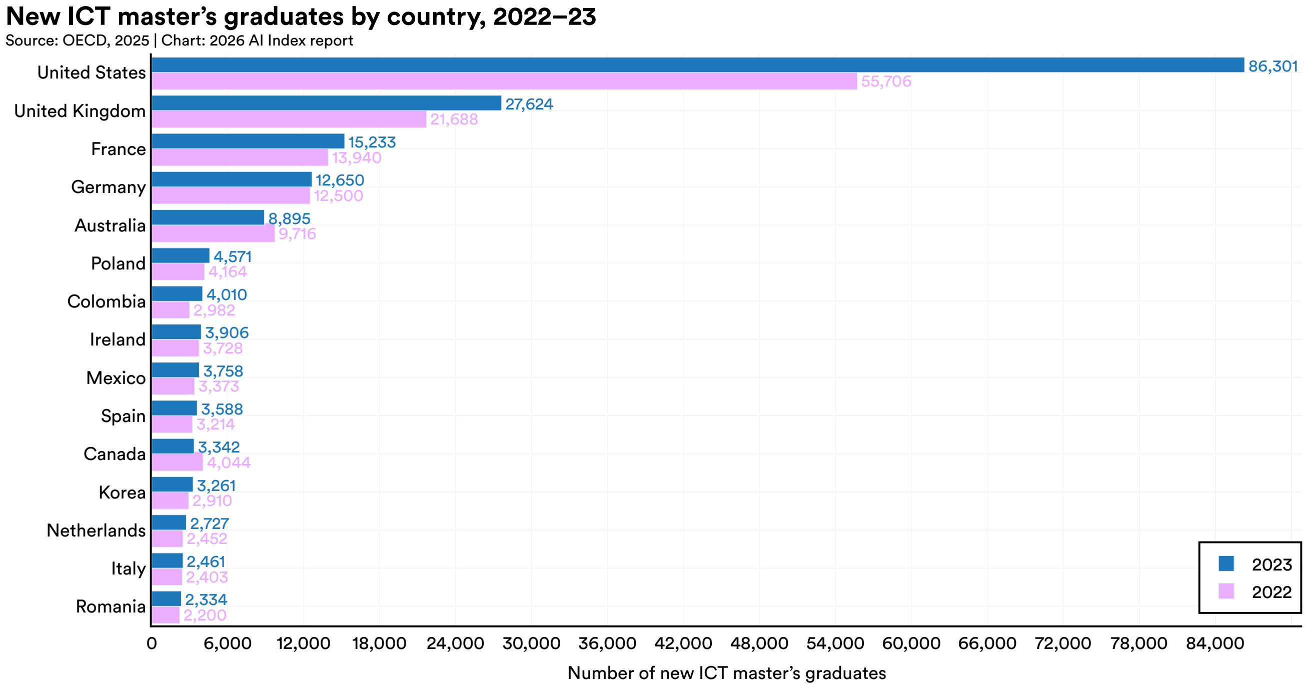


Figure 7.2.11

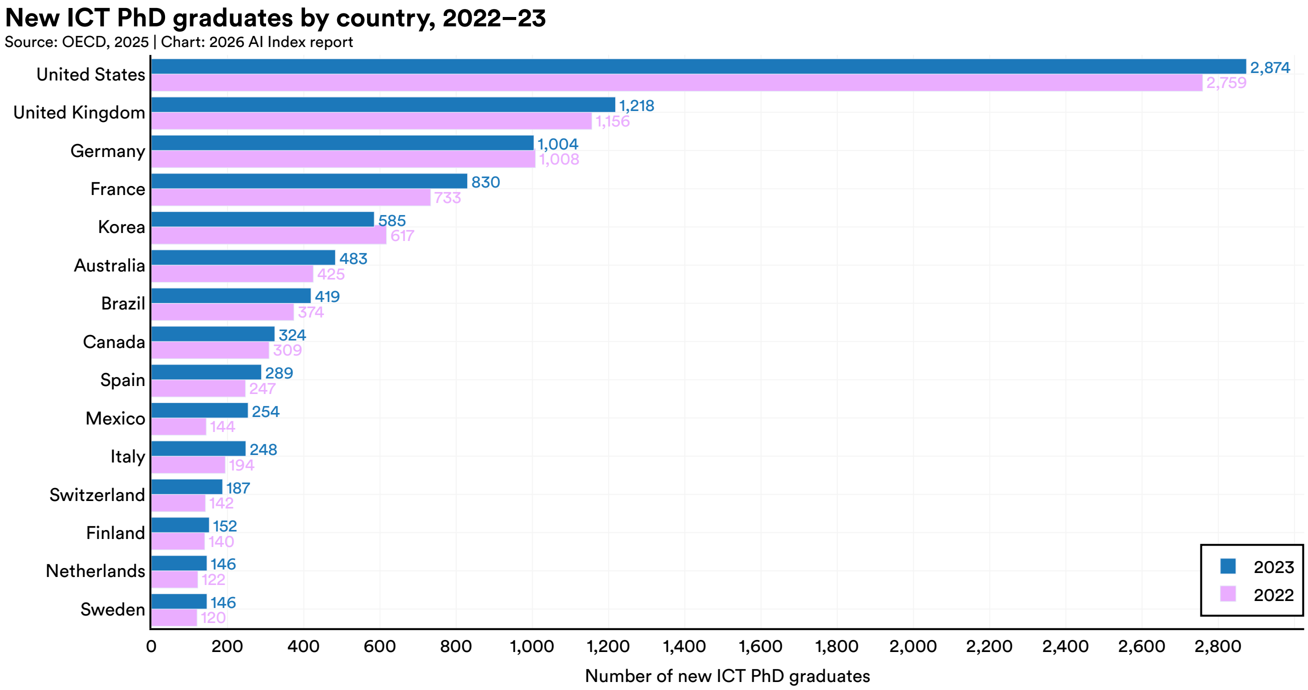


Figure 7.2.12

Gender parity among ICT graduates remains uneven across countries and degree levels (Figure 7.2.13). On average, women account for 20% of associate's graduates, 22% of bachelor's graduates, 29% of master's graduates, and 29% of PhD graduates. While the share of associate's graduates declined year over year, the share of PhD graduates increased 4 percentage points. Women comprised at least half of ICT graduates in Peru at the associate's level, and in Costa Rica and Latvia at the PhD level. Turkey, which had reported gender parity at all levels in the prior year, saw its shares move closer to the global averages in 2023. The gender composition of these graduates has been consistent year over year, similar to the pattern among AI authors and inventors documented in Chapter 1, where the gender ratio has shown little change over the past 15 years.

Percentage of new ICT postsecondary graduates who are female by country, 2022–23

Source: OECD, 2025 | Chart: 2026 AI Index report

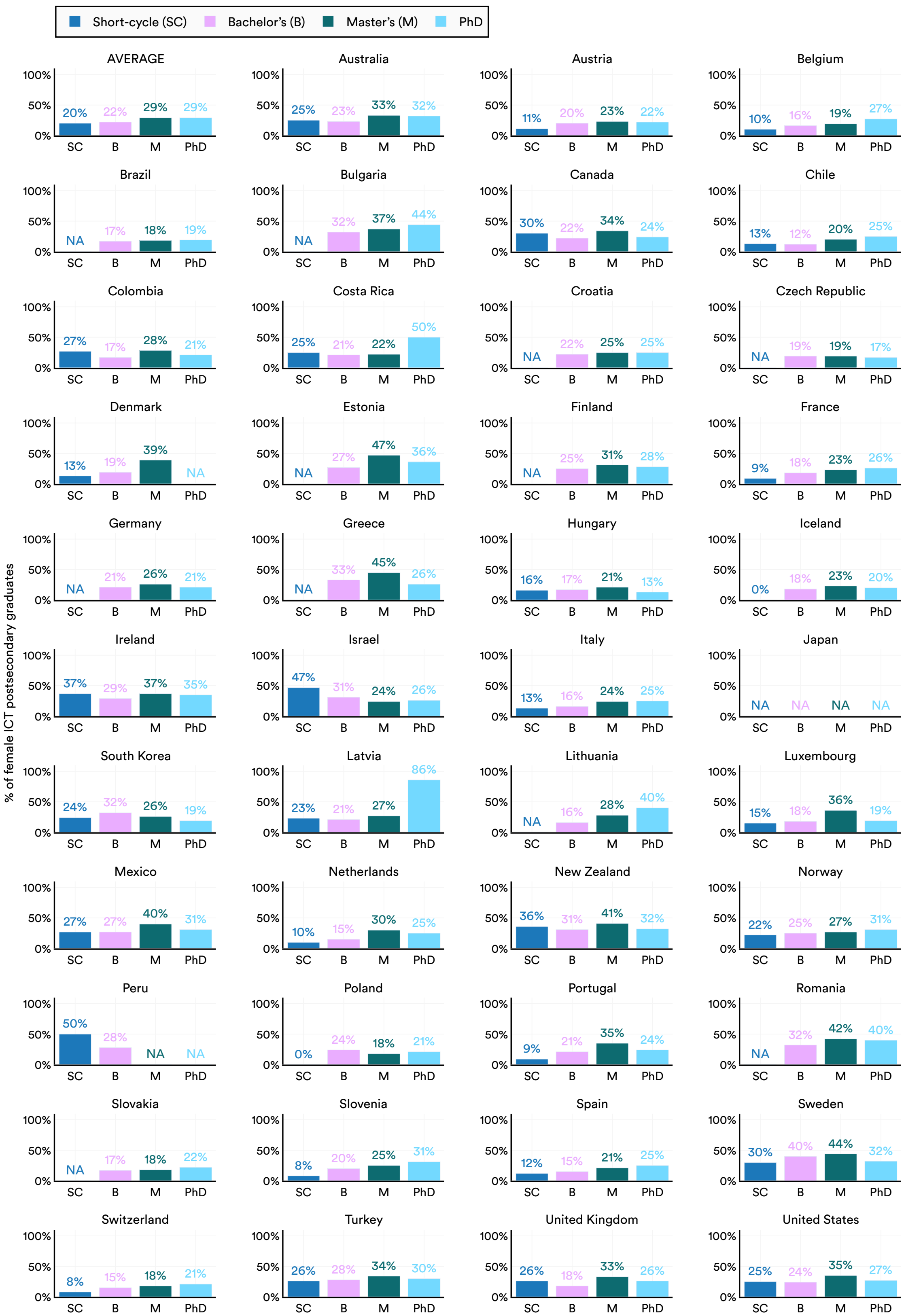


Figure 7.2.13

CS, CE, and Information Faculty

In 2024–25, there were over 6,600 CS, CE (computer engineering), and information faculty in the United States and Canada (Figure 7.2.14). Nearly two-thirds of them filled tenure-track positions. The Computing Research Association (CRA) projections suggest the number of faculty will increase over the next two academic years, with the most growth in postdoctoral positions.[8]

Hispanic/Latino, Black, and Indigenous people are underrepresented in faculty positions, as are all women except Asian women (Figure 7.2.15).[9] Asian and Native Hawaiian/Pacific Islander men are overrepresented among faculty.

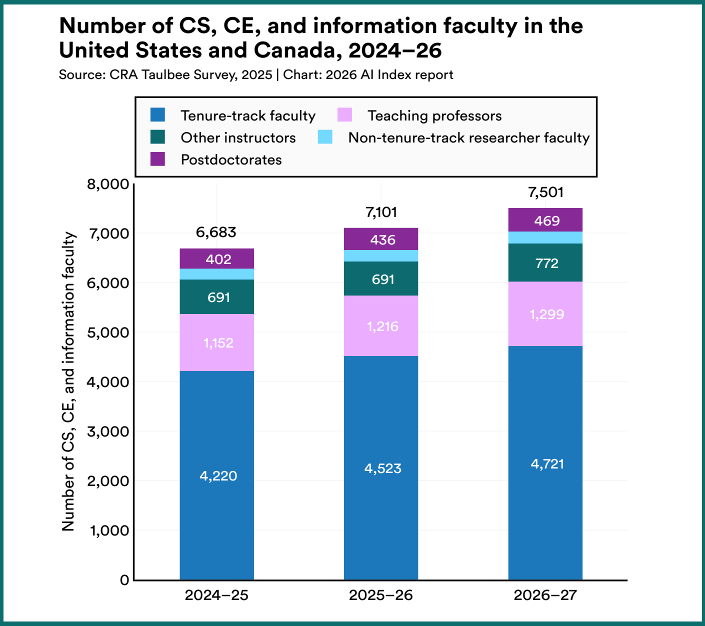


Figure 7.2.14

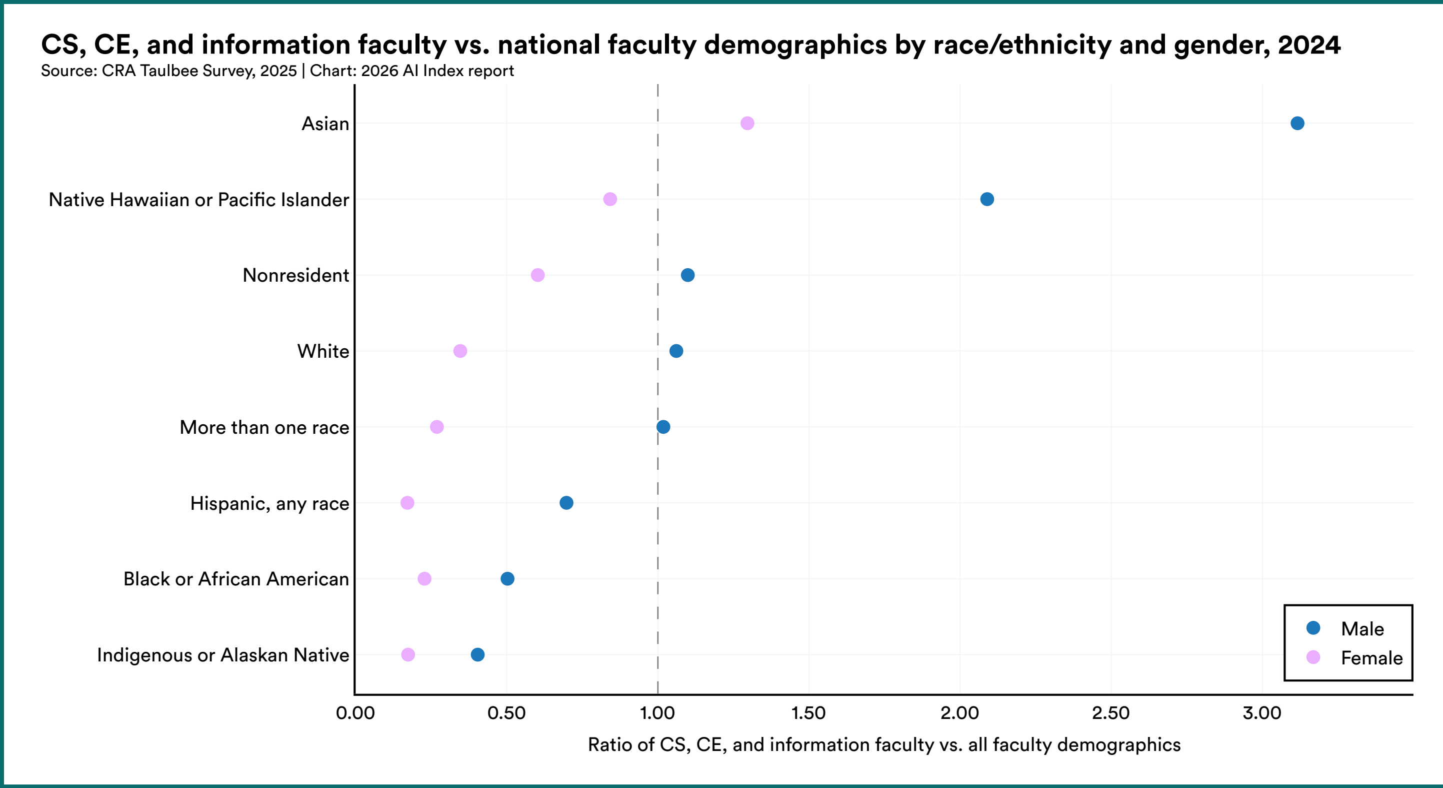


Figure 7.2.15

8 Due to changes in CRA's methodology, these figures are not directly comparable to faculty counts published in previous editions of the AI Index.

9 National faculty demographics are from the United States (NCES), whereas the faculty data also includes Canada. Postdoctorates were not included in the comparison data because they were absent from the national faculty demographics.

Student Use of AI Tools

While this chapter's focus is AI education, how students are learning is also changing. Examining AI in education, or the use of AI to complete teaching and learning tasks, helps provide a more complete picture of the impact of AI on the field of education. In Chegg's 2025 survey of university students from 15 countries, 80% said they have used generative AI to support their learning. That is double the share reported in 2023, when only 40% of students reported having used generative AI for school. Generative AI usage varies widely by country, with 95% of Indonesian students saying they have used it, compared to 67% in the United States and the United Kingdom (Figure 7.2.16). Students who use generative AI for school report doing so frequently: 56% input a question at least once a day. For those students who do not use AI tools for school, the top reasons include accusations of academic misconduct (45%), content accuracy (38%), and school policies restricting AI use (33%).

University students (% of total) who have used GenAI to support their university studies, 2023 vs. 2025
Source: Chegg Global Student Survey, 2023 and 2025 | Chart: 2026 AI Index report

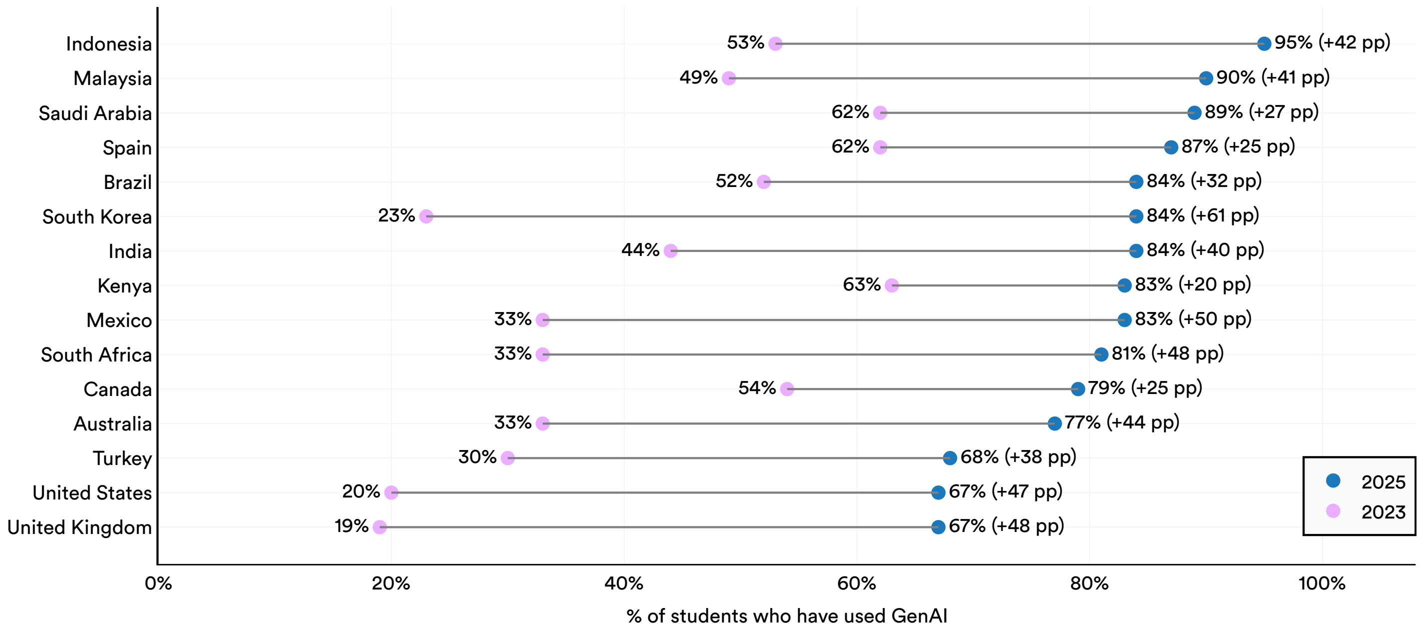


Figure 7.2.16

University students report using AI in similar ways to high school students, including researching, brainstorming/generating ideas, and editing essays. One notable difference is that university students are more likely than high school students to use AI to understand a concept (56% vs. 41%); in fact, understanding a subject is the top use of generative AI tools among university students (Figure 7.2.17).

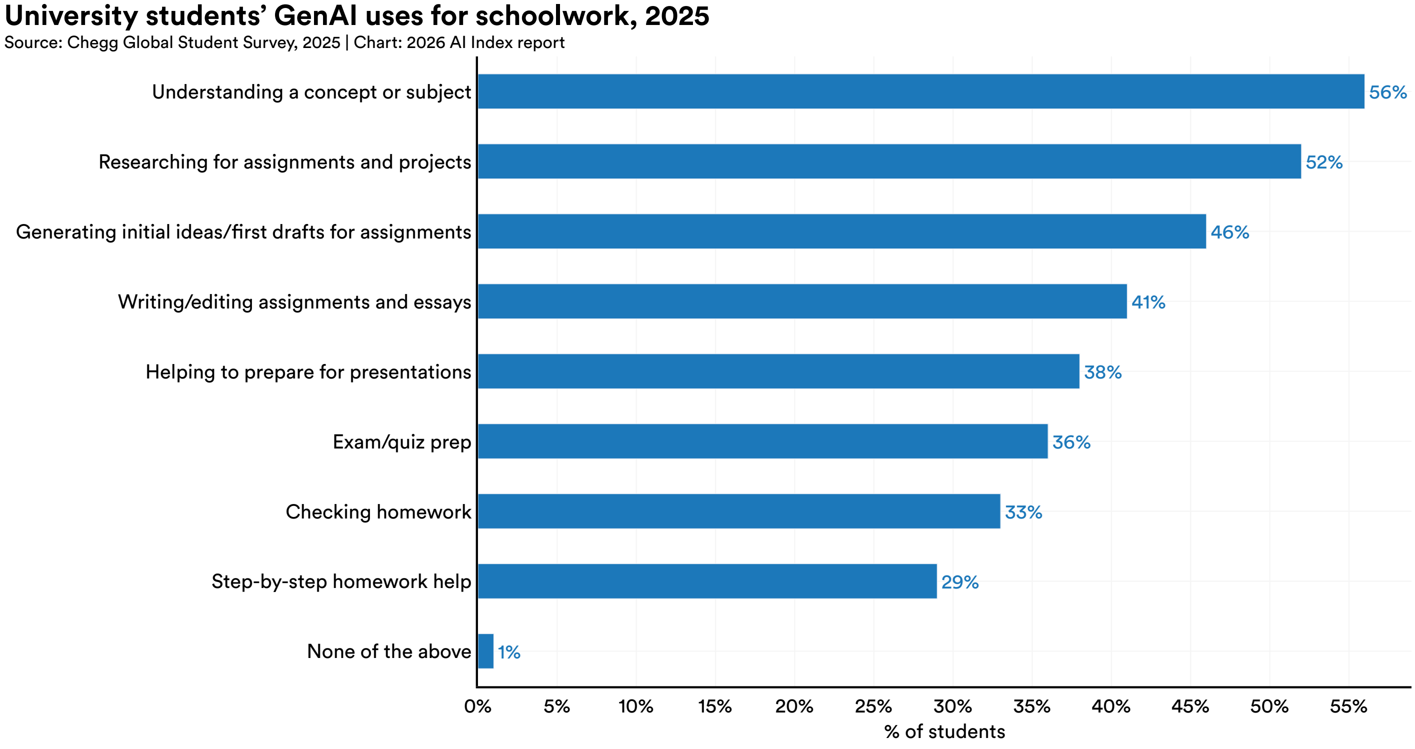


Figure 7.2.17

Anthropic analyzed how students use Claude, its generative AI tool, and found that most students use it for higher-order thinking skills[10], such as creating (39.8%) and analyzing (30.2%), rather than lower-order thinking skills, like applying (10.9%) and understanding (10.0%). These uses may suggest that students are relying on generative AI tools for important cognitive skills rather than developing them independently; indeed, another survey found that 55% of U.S. college students believe using generative AI tools has had a mixed effect on their critical thinking skills.

Nonetheless, university students speak positively about using AI tools in education. A survey of over 73,000 California State University students showed that 64% of them agree that AI has positively affected their learning experience. The students in the Chegg survey listed several benefits from using AI tools. Half of respondents reported increased understanding of topics, 49% report improved ability to finish assignments, and 41% report improved organization. They also reported that AI makes their learning process more efficient, with 55% of university students saying AI helps them learn faster, and 41% saying it frees up more of their time.

University students are still concerned about accusations of cheating and appropriate uses of AI; in response, more universities have implemented AI use policies. A faculty survey noted that 48% of institutions now have policies governing acceptable uses of generative AI, an increase of 9 percentage points since 2025. In the U.K., 80% of students think their university has a clear policy on generative AI use in assessments, which is a 16 percentage point improvement from the previous year.

10 These categories refer to levels of cognitive complexity as defined by Bloom's Taxonomy, a widely used framework in education that classifies skills from lower-order (remembering, understanding, applying) to higher-order (analyzing, evaluating, creating).

7.3 K–12 CS and AI Education

Data on AI-specific education at the K–12 level remains limited. This section tracks developments in CS education as a proxy, with attention to the emerging state and federal policies that are beginning to address AI directly.

United States

Code.org's annual State of CS Education Report, which tracks CS education access, participation, and state policy, was expanded in 2025 to include an analysis of states' AI education policies as of December 1, 2025. With only four states emphasizing AI in their CS standards, adoption of AI education remains limited.

Foundational Computer Science

Between the 2017–18 and 2023–24 academic years, the percentage of U.S. high schools offering CS increased from 35% to 60%. The national average has held steady since 2023–24, with the same 60% of high schools offering foundational CS classes in 2024–25. There is, however, growth in many states and regression in a few (Figure 7.3.1). In states where offerings declined, budget cuts or reallocation toward other priorities, including literacy and student crisis support, may be contributing factors.

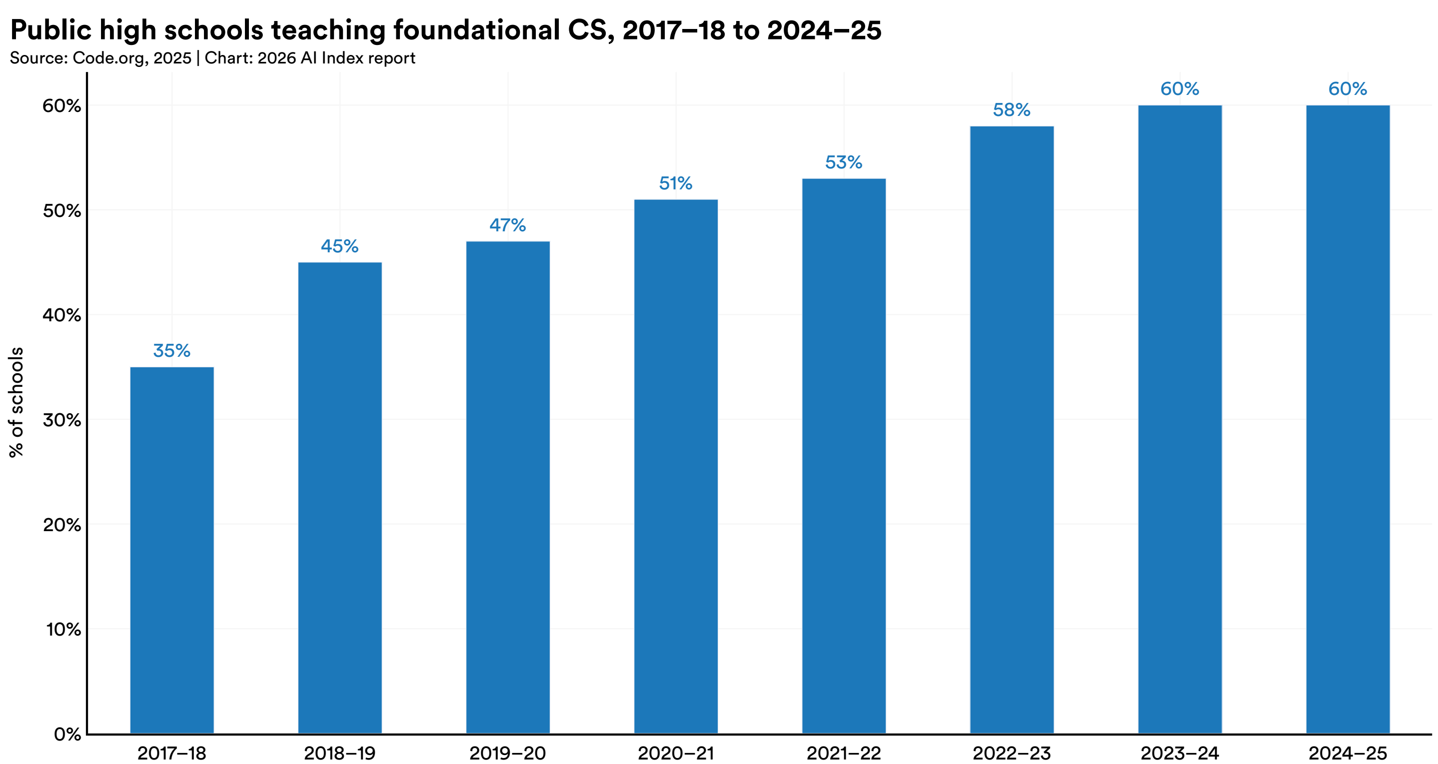


Figure 7.3.1

Out of 22 states reporting data for both 2023–24 and 2024–25, five states (AR, DE, LA, MD, SC) maintained the percentage of schools offering CS classes; three of them were already at or nearing universal access (AR and MD reporting 100% and SC reporting 92%) (Figures 7.3.2 and 7.3.3). Nine states and the District of Columbia (DC) reported some growth in the percentage of high schools offering CS. Of those, six (GA, IA, MS, NC, UT, WA) reported minimal growth (1%–5%). Two states (CA, MT) plus DC reported modest growth (6%–10%). One state, TN, reported significant growth, increasing the percentage of high schools offering CS classes by 22% (from 61% to 83%). This increase may reflect a 2022 policy requiring all K–12 students to have access to CS; districts were required to implement the state's K–12 CS standards and a one CS credit graduation requirement starting with incoming freshmen in the 2024–25 academic year. A few states reported small decreases in the percentage of schools offering CS, with only one (WY) reporting a 10% decrease (from 74% to 64%).

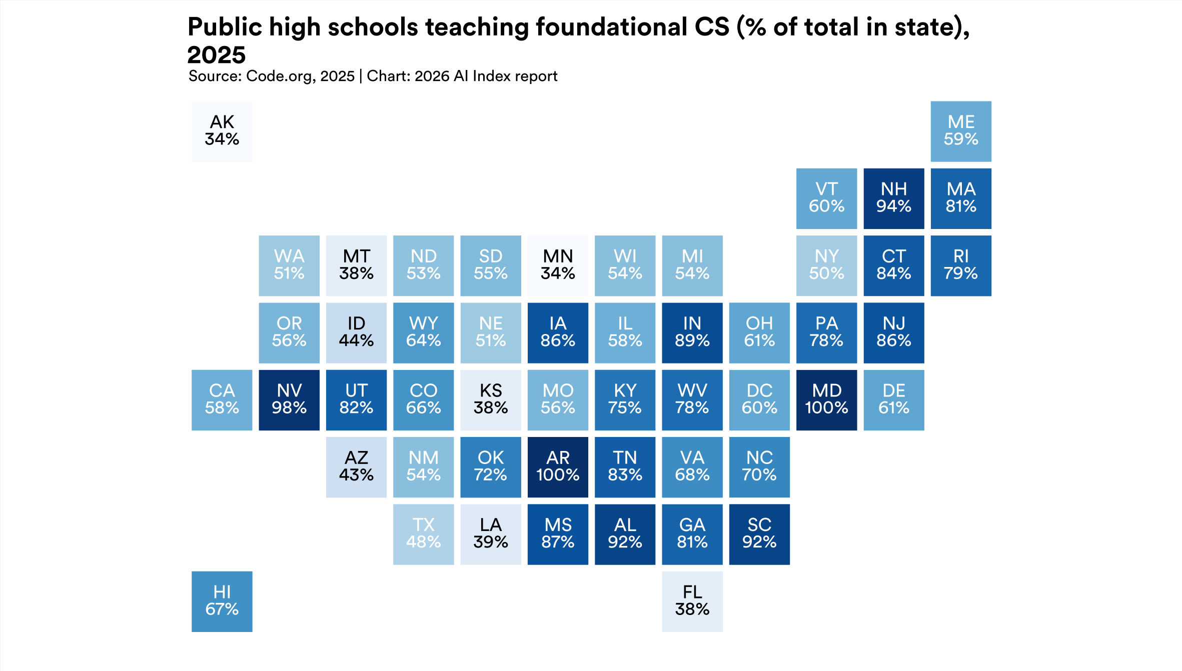


Figure 7.3.2

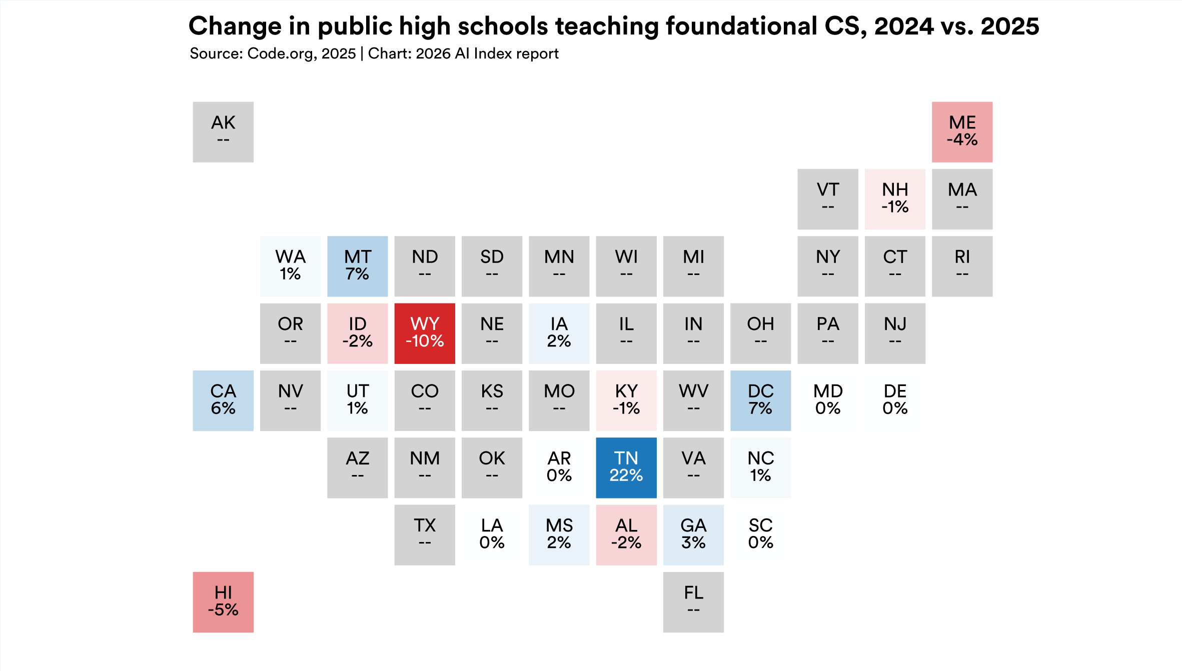


Figure 7.3.3

As a result of disparities in education funding, CS education access varies by school size, geographic area, socioeconomic status, and student race/ethnicity (Figures 7.3.4 to 7.3.7). In 2025, 91% of large high schools, 77% of medium-sized high schools, and only 44% of small high schools offered foundational CS courses. As public school closures continue in some areas, school size and resource distribution may shift as nearby schools absorb displaced students. Whether funding follows those students, and how consolidation affects CS access, will be important to monitor.

Title I[11] schools (60%) are slightly less likely to offer CS than non–Title I schools (65%). Rural (57%) and urban (59%) high schools are less likely than suburban (71%) high schools to offer CS. The similar rates of rural and urban CS access may reflect shared constraints, including the digital divide and less access to CS teachers. Among Black, Hispanic/Latino, Native Hawaiian/Pacific Islander, and white high school students, the rates of access to foundational CS courses fall within a narrow range (80%–82%). Asian students (91%) are most likely to have access to CS courses. Native American students are least likely to have access to CS, though they had the largest year-over-year growth, from 66% in 2023–24 to 70% in 2024–25.

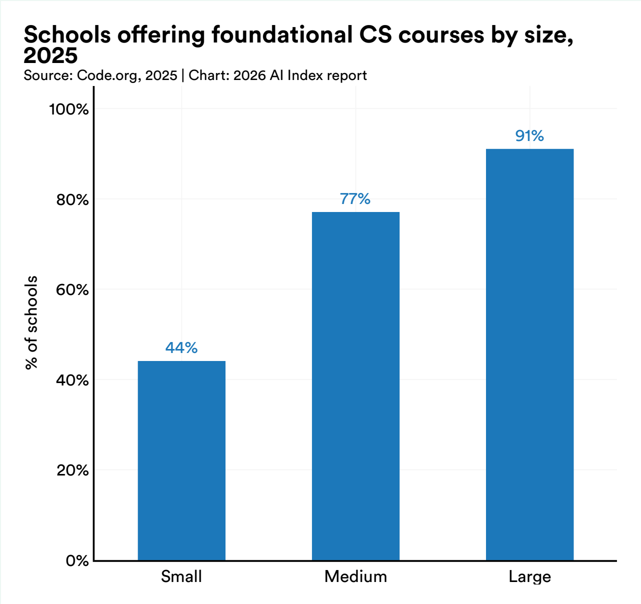


Figure 7.3.4

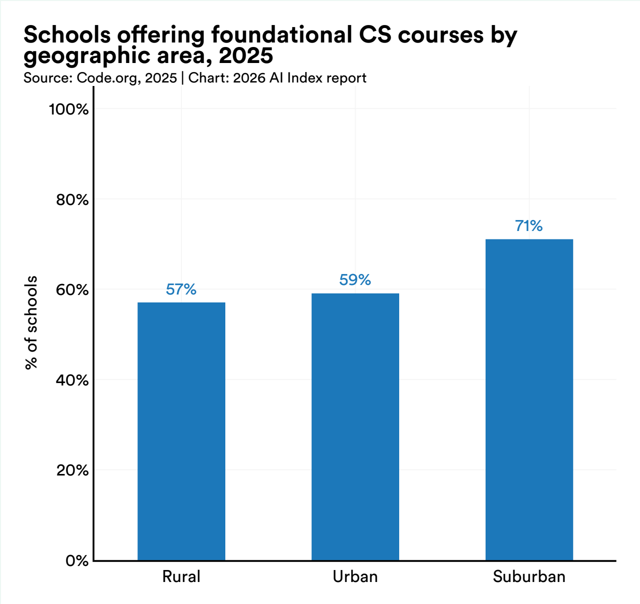


Figure 7.3.5

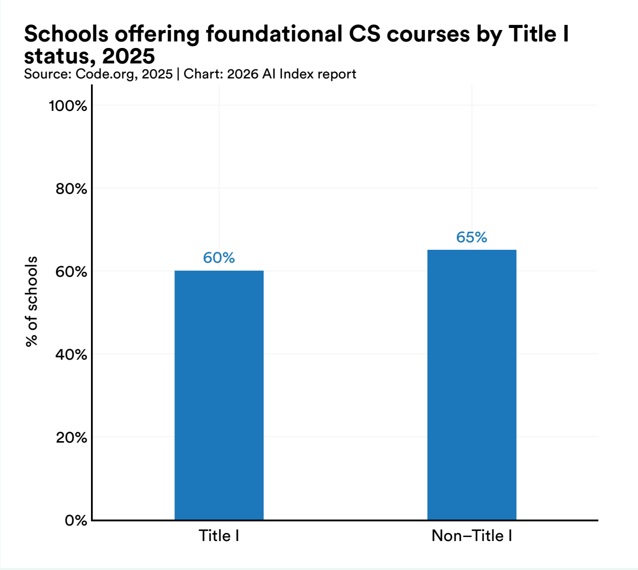


Figure 7.3.6

11 Title I schools serve students from low-income families and receive supplemental federal funding.

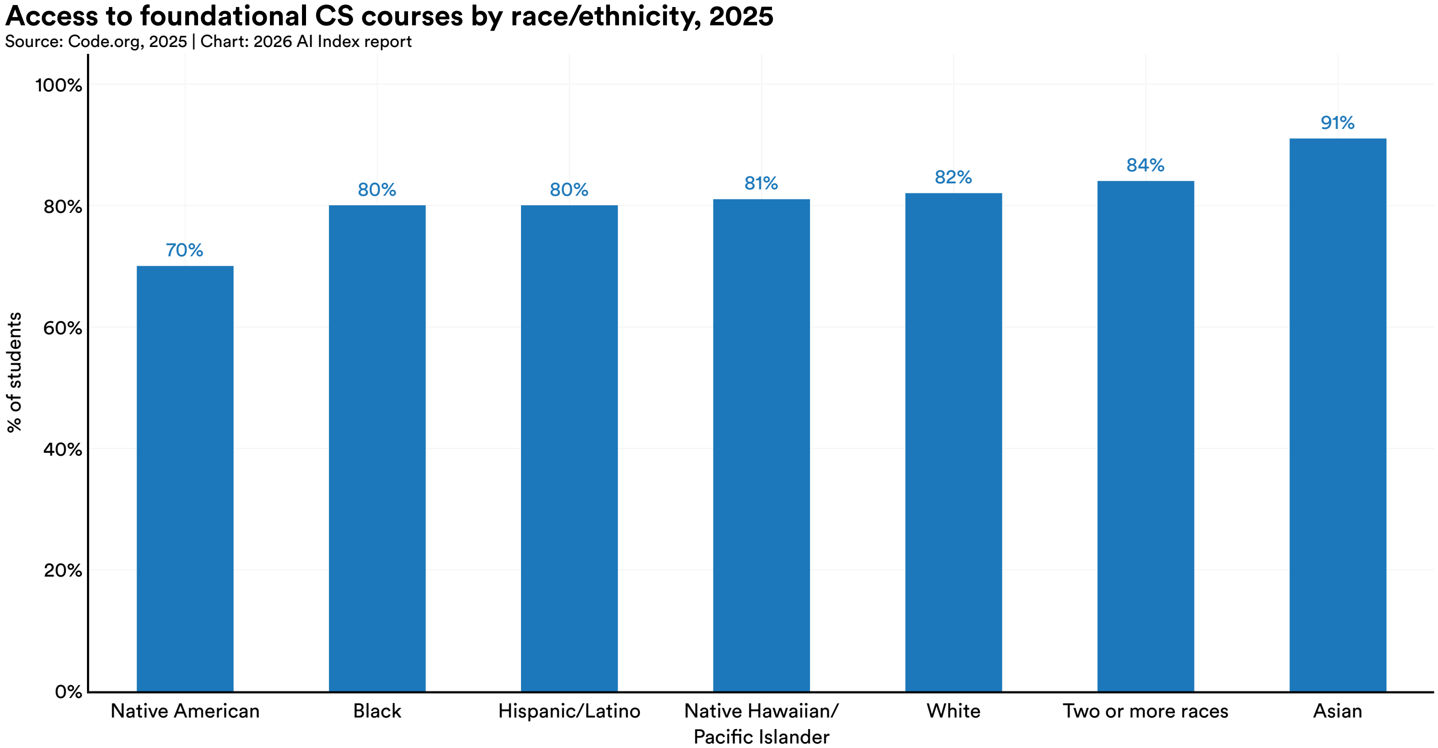


Figure 7.3.7

Based on participation data from 42 states, 6.1% of students were enrolled in CS in 2024–25, but student participation in CS varies by state (Figure 7.3.8). Arkansas and South Carolina report the highest participation rates, around 25%, while Idaho and Minnesota report the lowest (1.8%). Sixty-two percent of the reporting states (26 of 42) experienced a decrease in CS participation, though nearly half (12) of them reported decreases of less than 0.5% (Figure 7.3.9). Thirteen states (31%) reported an increase in student participation. The states that saw the largest increases in CS participation were North Dakota (11.1% increase from 5% to 16.1%), Tennessee (7.2% increase from 6% to 13.2%), and Arkansas (5.1% increase from 20% to 25.1%). Comparison with other states, including Ohio and California, is not possible as they did not report participation rates in 2023–24.

Several states with the highest percentage of high schools offering foundational CS courses also reported the highest participation rates, but the correlation was not evident in every state (Figure 7.3.10). Arkansas and South Carolina have the highest participation rates at 25.1% and 25.7%, respectively. This is not surprising given they have a CS requirement for graduation and near universal access rates (100% for Arkansas; 92% for South Carolina). Maryland also has universal access to CS, but fewer of their students (16.7%) take the available courses. Meanwhile, Rhode Island reports just 79% of their schools offer foundational CS courses, but a higher percentage of their students take those courses (18.4%).

Public high school enrollment in CS (% of students), 2025
Source: Code.org, 2025 | Chart: 2026 AI Index report

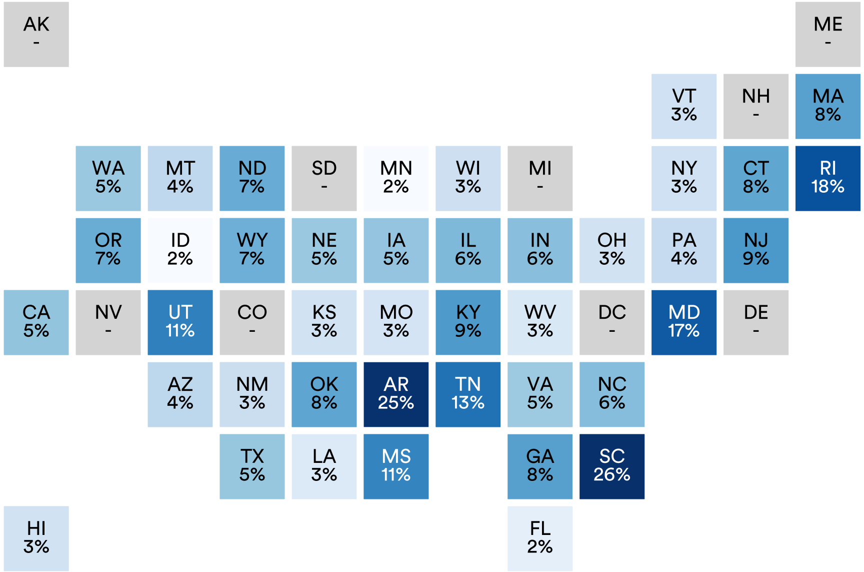


Figure 7.3.8

Change in public high school enrollment in CS (% of students), 2024 vs. 2025
Source: Code.org, 2025 | Chart: 2026 AI Index report

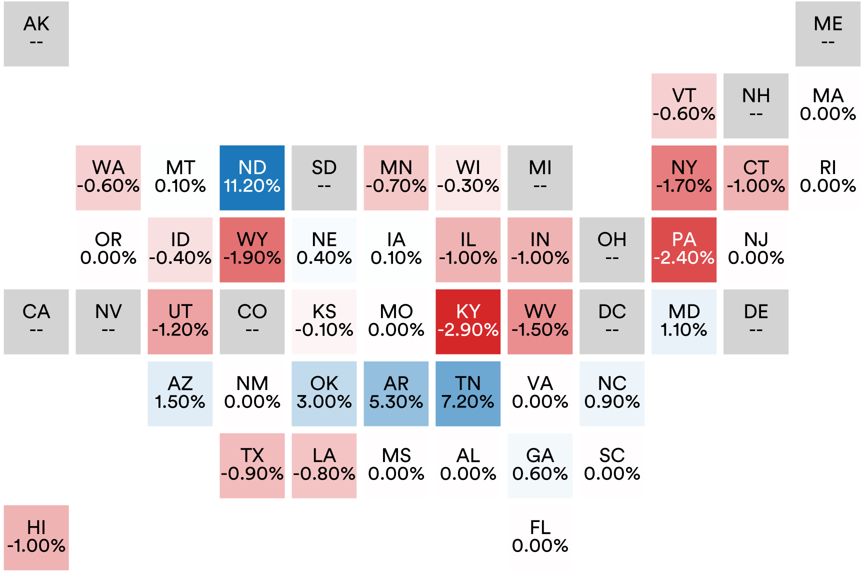


Figure 7.3.9

Percent of high schools offering CS vs. percent of students enrolled in CS by state, 2025
Source: Code.org, 2025 | Chart: 2026 AI Index report

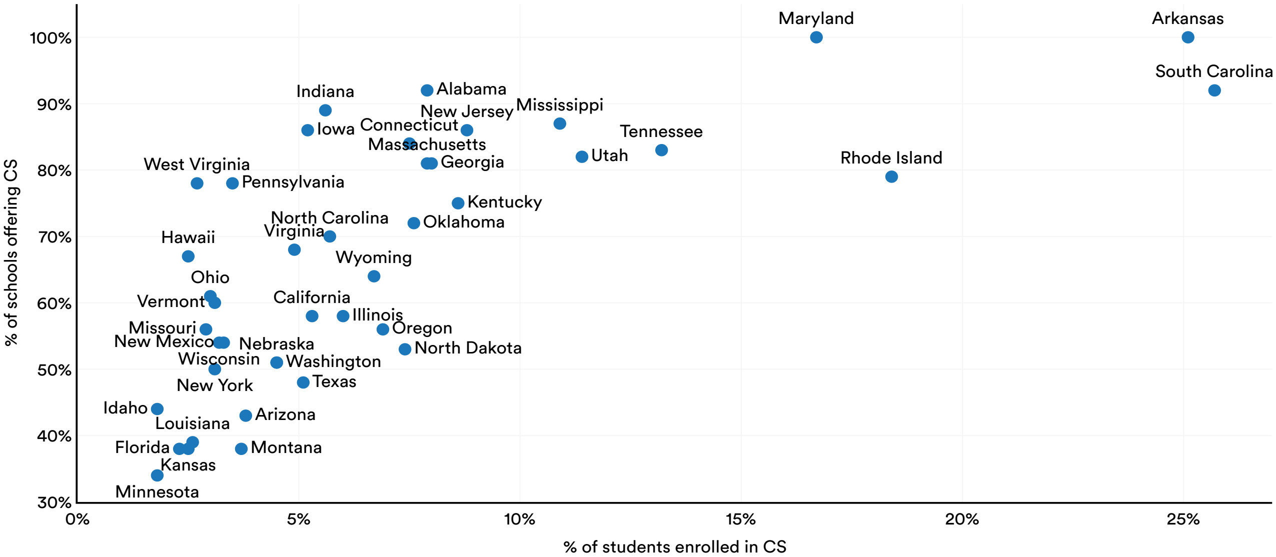


Figure 7.3.10

CS enrollment data also shows gaps for several subgroups (Figure 7.3.11); here too, the data should be interpreted with caution, as not all states reported enrollment data this year. Last year's analysis showed near or above proportional representation for Black, Native American/Alaskan, and white students at the national level. That trend continues this year, with Native Hawaiian/Pacific Islander students moving closer to that mark, and Asian students and students with 504 plans overrepresented among participating students (Figure 7.3.12). The representation of Hispanic/Latino students, economically disadvantaged students, students with IEPs, and girls slightly improved, but these populations remain underrepresented in CS courses. English language learners (ELL) remain underrepresented, but between 2024 and 2025, their representation notably improved, which may be due to concerted engagement efforts and initiatives to boost the quality of CS instruction for ELL students.

Public high school enrollment in CS vs. national demographics by race/ethnicity, 2025
Source: Code.org, 2025 | Chart: 2026 AI Index report

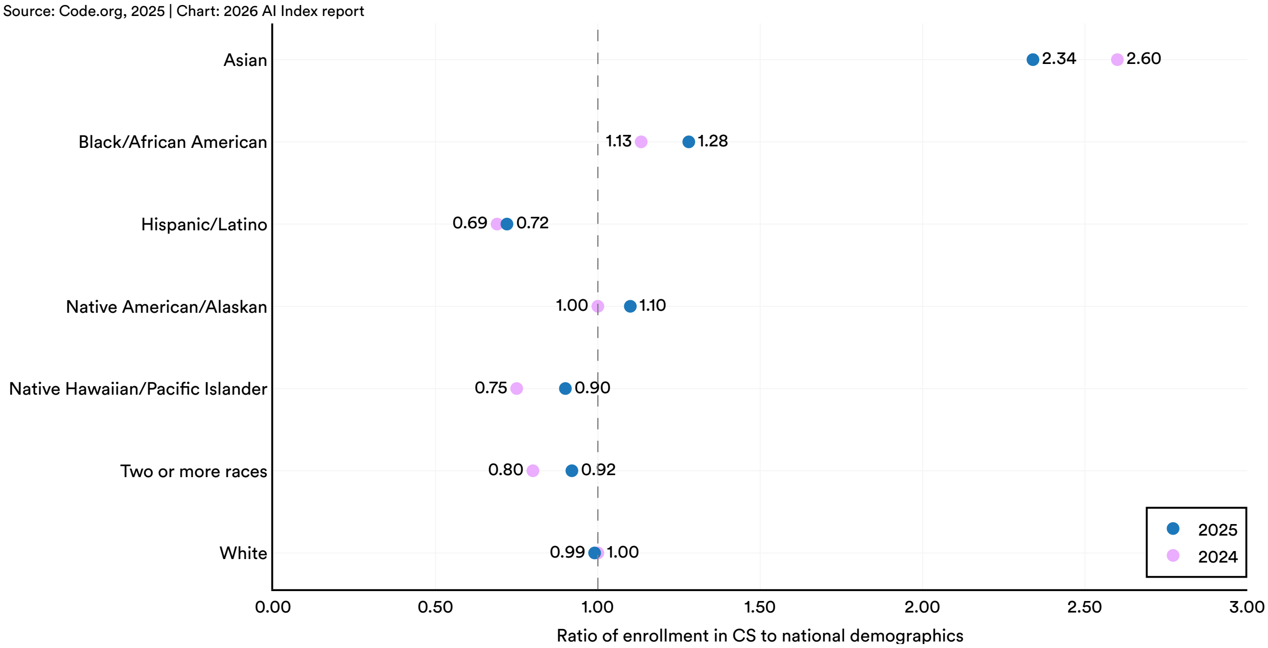


Figure 7.3.11

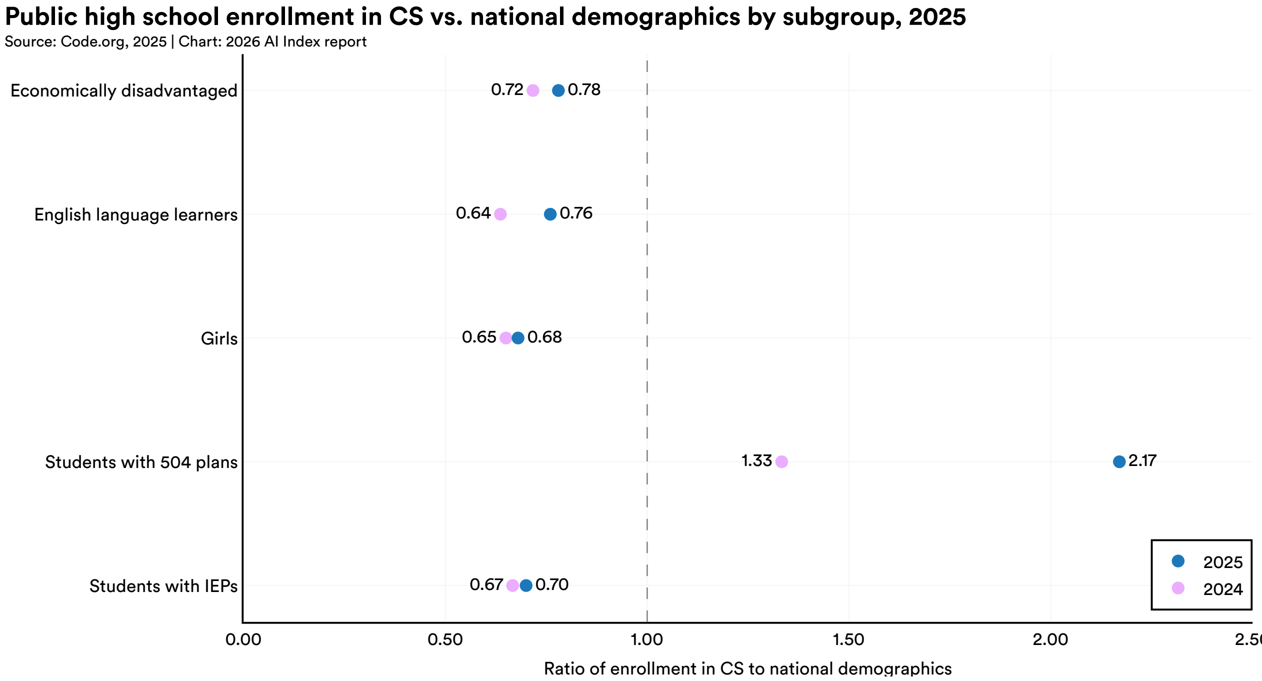


Figure 7.3.12[12]

Advanced Computer Science

Advanced coursework covers foundational AI concepts (e.g., AP CS Principles) and is an obvious pathway to build AI literacy and integrate more in-depth AI education. Since 2016, AP exam participation has grown steadily year over year, except for the plateau during the COVID pandemic between 2020 and 2021 (Figure 7.3.13). However, AP exam growth slowed from 21% between 2022 and 2023 to just 5% between 2023 and 2024. Despite improvement in student populations' representation across courses, students do not participate in AP exams proportionate to their racial/ethnic representation. Black, Native American/Alaskan, and Native Hawaiian/Pacific Islander students are better represented among CS education participants than students who took the AP exam in 2024; Hispanic/Latino students were better represented among AP exam takers than among the general population of students taking CS. Female students took the AP exam less often than male students in 2024; stereotype threat may explain the reluctance to take the exam and differences in scores. Asian students, multiracial boys, and white boys are overrepresented among those taking AP exams (Figures 7.3.14, 7.3.15, 7.3.16).

12 A student with a 504 plan receives accommodations under Section 504 of the Rehabilitation Act of 1973, a U.S. civil rights law that prohibits discrimination against individuals with disabilities. A student with an IEP (individualized education program) receives special education services under the Individuals with Disabilities Education Act. An IEP is a legally binding document that outlines a learning plan for a student with a disability designed to meet their unique needs and improve educational outcomes.

Number of AP computer science exams taken, 2007–24

Source: Code.org, 2025 | Chart: 2026 AI Index report

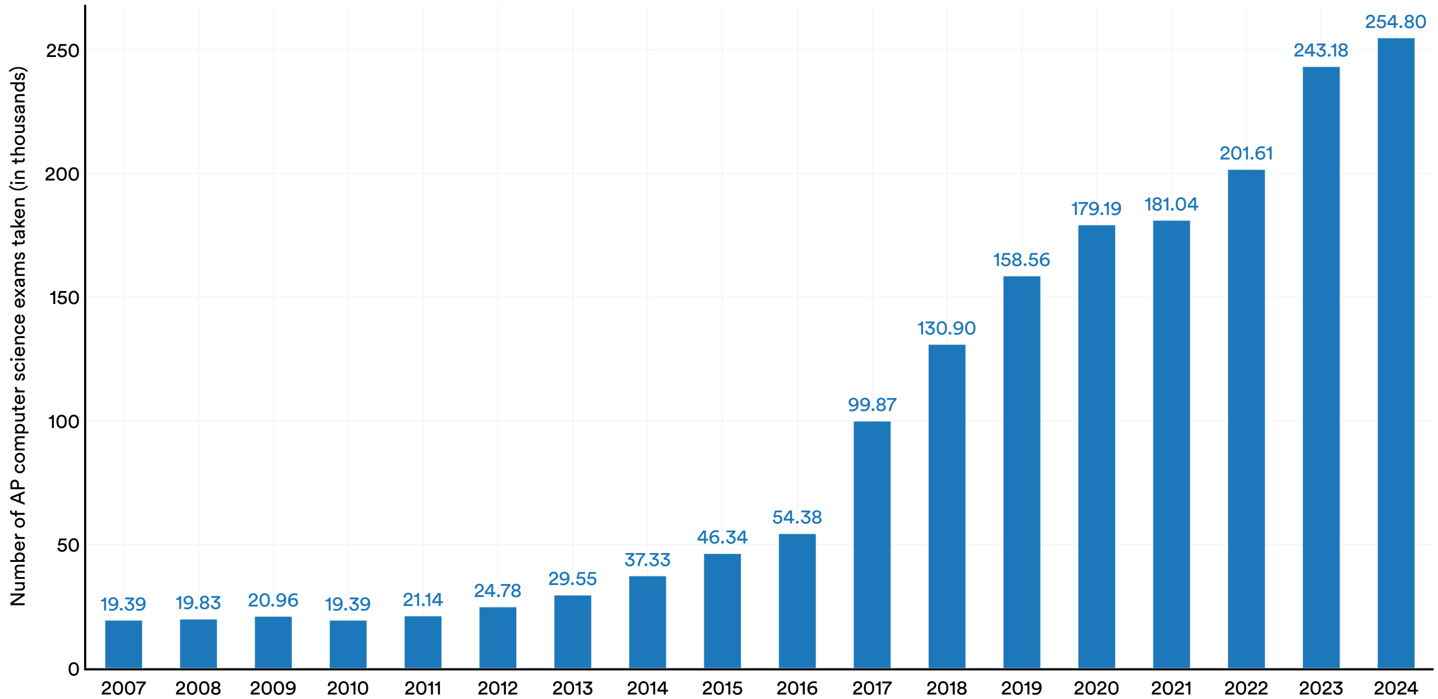


Figure 7.3.13

AP computer science exams taken by race/ethnicity, 2007–24

Source: Code.org, 2025 | Chart: 2026 AI Index report

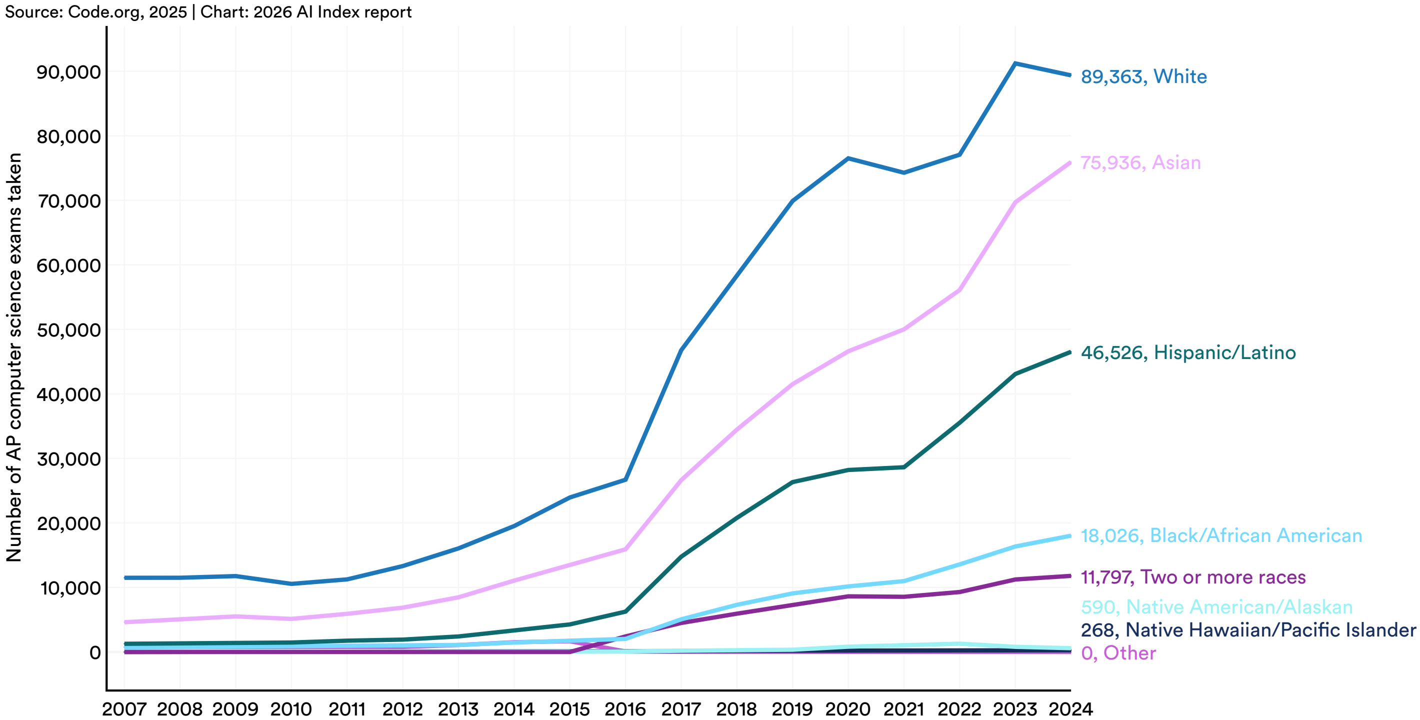


Figure 7.3.14

AP computer science exams taken (% of total responding students) by race/ethnicity, 2007–24

Source: Code.org, 2025 | Chart: 2026 AI Index report

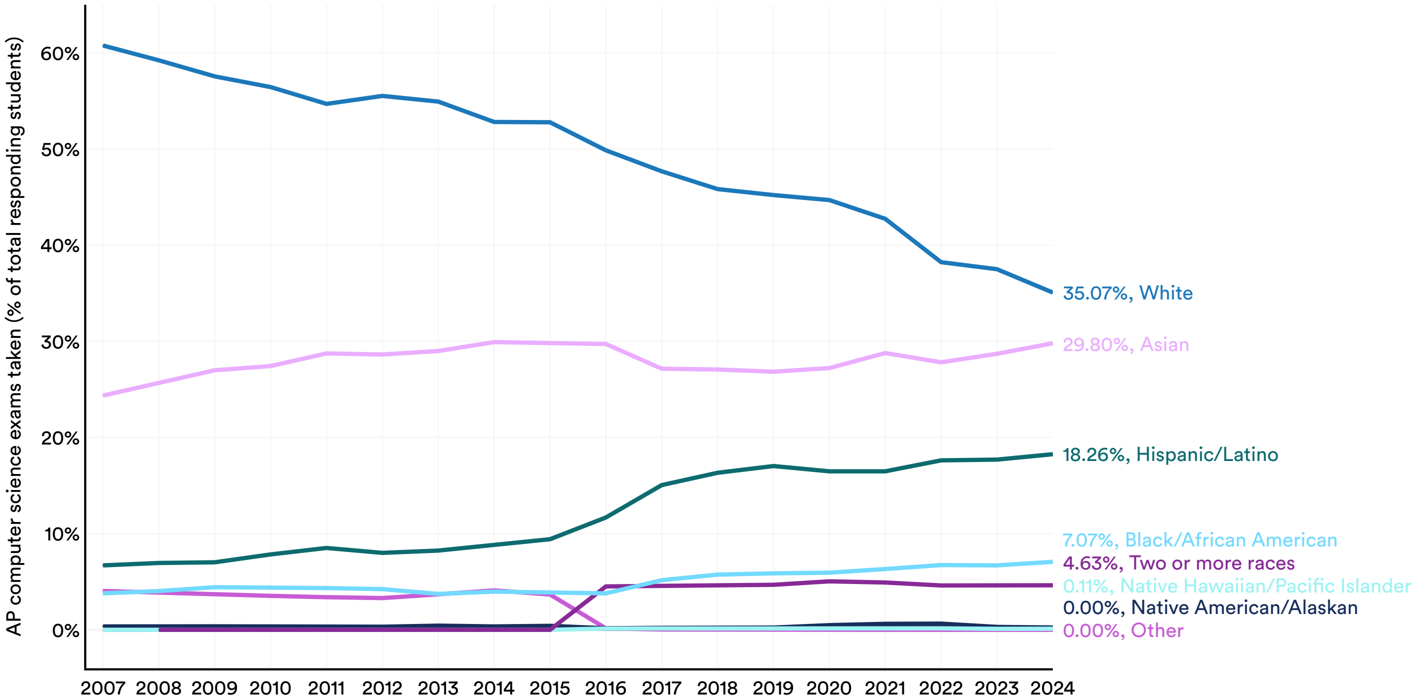


Figure 7.3.15

AP computer science exam participation vs. national demographics by race/ethnicity, 2024

Source: Code.org, 2025 | Chart: 2026 AI Index report

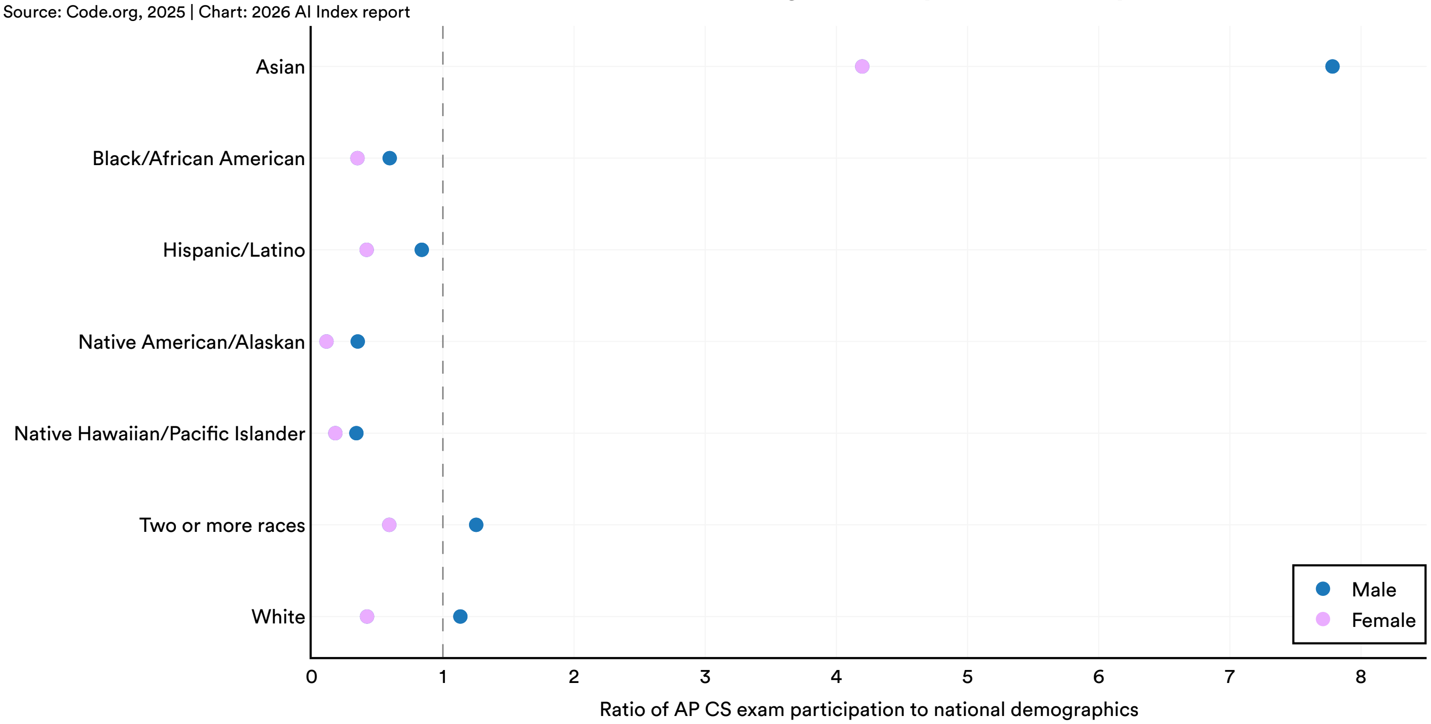


Figure 7.3.16

K-12 Student Use of AI Tools

Using AI tools for educational purposes is increasingly popular among middle and high school students. Estimates on student use of AI to complete school-related tasks range from about 50% to 84%, based on survey data.[13] While students acknowledge concerns (e.g., false cheating accusations, diminished critical thinking, and weakened academic skills), studies suggest that usage is trending upward, with a majority of students now advocating for AI use in schools. One survey found that about half of students surveyed agreed that schools should be required to teach students how to use AI (52%) and that students should be allowed to use AI to complete homework (47%); another survey reported even higher rates of agreement, with 65% of middle school students and 73% of high school students stating that students should have access to and be able to use AI tools to complete schoolwork. High school students report using generative AI most often for conducting research and finding sources, editing or revising essays, and brainstorming ideas (Figure 7.3.17), and they report benefiting from increased access to learning materials and more efficient learning.

High school students' GenAI uses for schoolwork, 2025
Source: College Board, 2025 | Chart: 2026 AI Index report

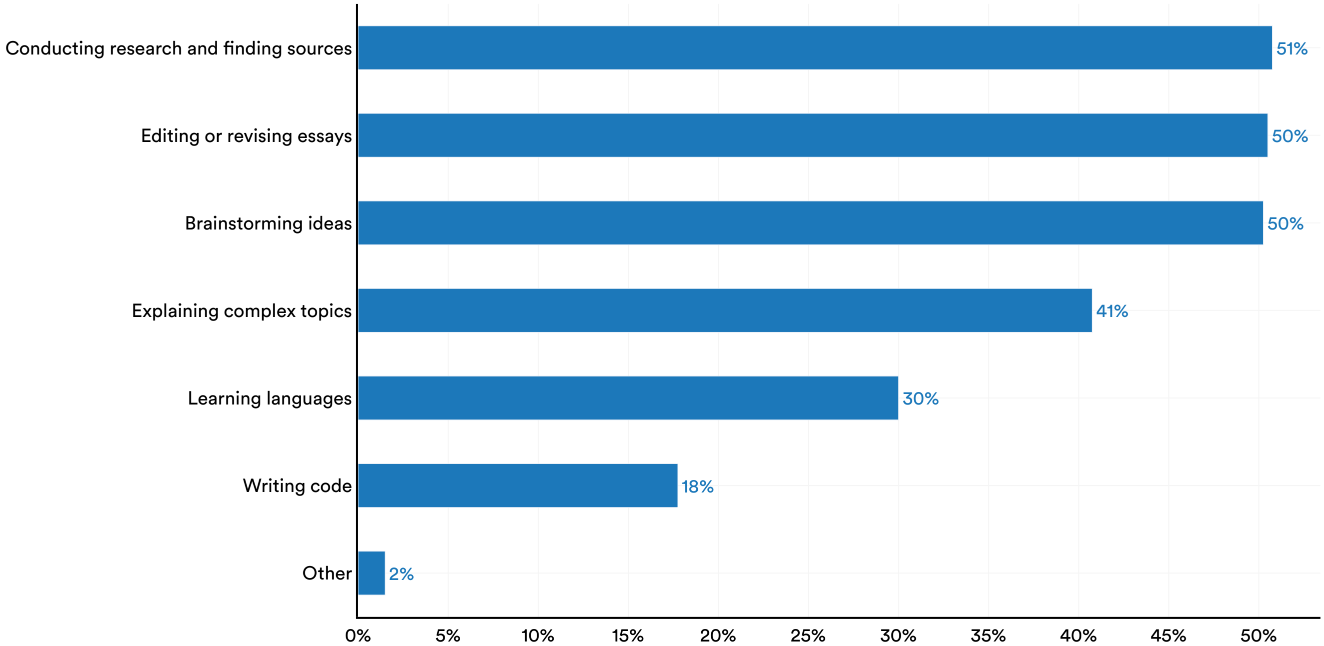


Figure 7.3.17[14]

Education Standards, Policies, and Guidance

Only about half of middle and high schools have policies regarding AI use. Of that, only 28% permit AI use in some circumstances, while 22% do not. Schools with AI policies, especially policies that allow for AI use in schoolwork, are more likely to be in wealthier and more urban communities. However, the utility of those policies, given their lack of clarity, is in question. Only 36% of students described their school's policies as extremely clear, and 47% have wanted to use AI for schoolwork but were unsure if it was allowed. A teacher survey found even lower ratings for clear policies, with teachers saying that only 6% of their schools had clear, comprehensive policies.

13 CDT (2025), 50%; College Board (2025), 84%; RAND (2025), 54%.

14 This chart shows the average percentage across College Board's four survey administrations in 2025.

State K–12 AI Guidance in the United States

Most education policy in the United States is determined at the state level. As of January 2026, 30 states have issued guidance on AI *in* education. Regarding policy focused specifically on AI education, 17 states have issued guidance that clarifies CS as foundational to AI, and five states have allocated specific professional development funding for AI education, according to the 2025 State of AI + Computer Science Report.

Perhaps the most significant AI education guidance generally comes in the form of standards that define learning outcomes for K–12 students. As of January 2026, 45 states have adopted K–12 CS standards, while five states plus DC do not have such standards. The majority (29 states) include AI but only to a very limited extent, and it is typically restricted to the high school level, similar to the current CSTA K–12 Standards, Revised 2017, which act as the de facto national standards. Ten states' standards make no specific mention of AI content. Six states have CS standards with significant AI-specific content, and another two states have published draft revised standards that also include significant AI-specific content (Figure 7.3.18).

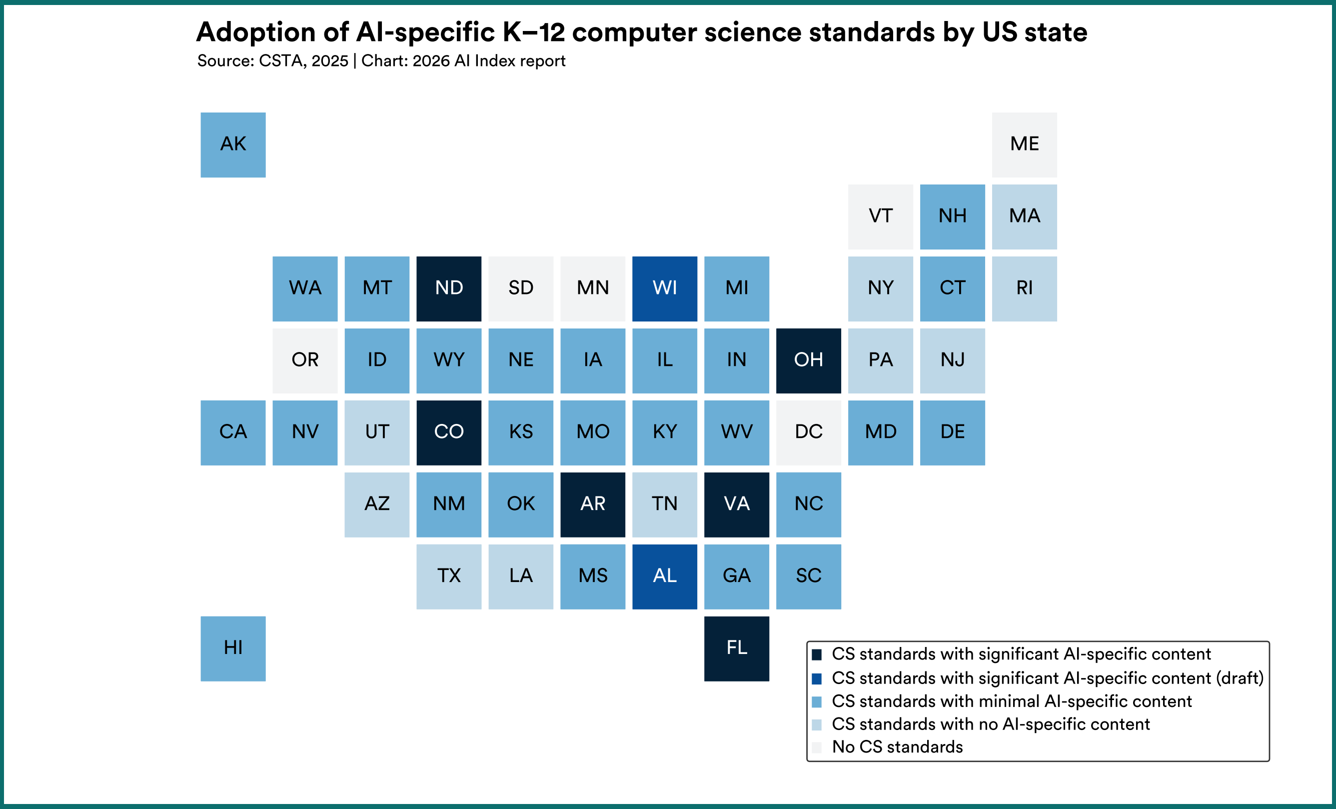


Figure 7.3.18

States with significant AI standards were all adopted in the last few years or are currently under development. See Table 4.1 for a summary of the features and organization of the state standards with significant AI content.

Table 4.1. Features and organization of state standards with significant AI content

State	Year	Earliest grade	Approach	Organization & labeling of AI content
Alabama	2025 - DRAFT	1st grade	Integrated across concepts	An [AI] tag marks standards distributed widely across concepts, most commonly in Data Science > Data Collection and Representation; Impact of Computing > Emerging Technology; and Digital Proficiency > Digital Tools.
Arkansas	2025	9–12 elective	Elective course	AI is the focus and label of one entire level 3 course in Data Analytics and Machine Learning pathway.
Colorado	2024	2nd grade	Standalone concept	AI is one of six strands used to organize standards.
Florida	2024	1st grade	Integrated across concepts	AI content is organized into two main strands: Technological Impact (grades 1–12) and Emerging Technology (grades 6–12).
North Dakota	2025	Kindergarten	Integrated across concepts	AI content is organized into three subconcepts: Computing Devices and Systems > Artificial Intelligence; Algorithms and Computational Thinking > Creating Instructions for AI; and Impacts of Computing > Impacts of AI.
Ohio	2022	Kindergarten	Standalone concept	AI is one of six strands. The strand has five topics that align with the AI4K12 Five Big Ideas: Perception, Representation and Reasoning, Machine Learning, Natural Interactions, Societal Impacts.
Virginia	2024	4th grade	Integrated across concepts	AI content is organized into three strands: Computing Systems; Data and Analysis; and Impacts of Computing.
Wisconsin	2025 - DRAFT	Pre-K–5 (grade band)	Integrated across concepts	AI content is organized in two subconcepts: Computing and Society > Emerging Technologies; and Data and Analysis > Impacts of Data Science.

Revised CSTA K–12 Standards, slated for release in summer 2026, will delineate significant AI-related learning goals as part of a foundational CS education across grades K–12. To inform these standards, CSTA and AI4K12 convened a national group of educators, curricula developers, professional development providers, and researchers in 2025 to provide insights into identifying priority areas of AI knowledge and skills. Priorities include the human role in creating AI, reasoning, data and machine learning, ethical evaluation of AI systems, and societal impacts. In the new Pre-K–12 foundational standards, these AI priorities will be integrated across five concepts and most significantly organized into four subconcepts: Machine Learning, Impacts of Algorithms, Emerging Technologies, and Humans and Computing. Additionally, there will be two sets of high school specialty standards focused on advanced AI content. Given the high degree of current coherence, most states will likely adopt similar AI standards within the next five years.

Federal K–12 AI Guidance in the United States

An April 2025 Executive Order, Advancing Artificial Intelligence Education for American Youth, sought to define a national strategy for developing AI competency from K–12 through postsecondary education by promoting early student exposure to AI, integrating AI into instruction, and expanding professional learning for educators. It establishes a White House AI Education Task Force to coordinate federal efforts, launch a Presidential AI Challenge, and develop public-private partnerships that deliver K–12 AI resources at scale. The order also directs the Departments of Education, Labor, NSF, and Agriculture to prioritize AI in grants, research, teacher preparation, apprenticeships, and workforce pathways.

HIGHLIGHT:

The Implementation Gap in K–12 AI Policy

A research project from Expanding Computing Education Pathways (ECEP) assessed statewide AI policies across K–12 schools and found that state-level AI guidance is largely nonbinding and decentralized. Most states rely on existing federal laws like the Children's Online Privacy Protection Act (COPPA) and Family Educational Rights and Privacy Act (FERPA), rather than issuing AI-specific mandates. The responsibility for local policy development, tool vetting, and implementation falls on local education agencies, meaning the rigor of AI education and pace of adoption are determined by local capacity (e.g., number of trained teachers, funding) and decision-making.

Teacher preparation was also an identified gap. State-level documents recognize the importance of AI-related teacher training, but there are currently no state-level standards for programs or funding. Without steady financial backing or standardized training benchmarks, the quality of AI integration remains contingent on local resources.

At the same time, AP Computer Science, one of the most common pathways to advanced CS coursework in U.S. high schools, does not include AI-specific content. Policy guidance, teacher training, and curriculum would all need to align for AI education to reach students consistently, and at present, gaps remain in all three.

Global AI and CS Education

Despite the widespread mention of AI education in national education strategy plans over the past few years, few countries actually implemented AI education in 2025; it was more common for countries to integrate AI technology into education. For example, South Korea launched AI textbooks in primary schools in March 2025, only to reverse course a few months later due to parent and teacher pushback. In Greece, the government partnered with OpenAI to train secondary teachers to use ChatGPT in the classroom. And in Estonia, the AI Leap 2025 program is piloting access to AI learning applications with 20,000 students and 3,000 teachers during the 2025–26 school year.

Two countries, however, made significant strides in implementing AI education: China and the United Arab Emirates (UAE). In China, Beijing, Guangdong, and Hangzhou all began requiring AI education in the 2025–26 school year following the release of China's General AI Education Guide for Primary and Secondary Schools (2025 Edition) and Guide for the Use of Generative AI by Primary and Secondary Students (2025 Edition) in May 2025. All three areas have similar requirements, including a minimum number of instructional hours and curriculum that progresses through grade levels, starting with elementary students learning AI literacy skills and ending with high school students designing AI systems. The UAE similarly mandated AI education for all grade levels starting in the 2025–26 school year. Students will also progress through a grade-level curriculum that includes skills in foundational concepts, data and algorithms, software use, innovation and project design, and ethical awareness.

In lieu of widespread data on AI education, we again present data on CS education, especially since some AI content may be taught in CS classes. Similar to the challenges inherent in tracking CS education in the United States, caution is called for when interpreting global metrics because CS and ICT education are sometimes conflated with digital or computer literacy.

In 2025, approximately 93% of the world's countries taught CS (Figure 7.3.19). Thirty percent of countries mandate CS education in either primary or secondary school, while 63% have CS available in at least some schools but do not mandate it. Nearly three-fourths of countries integrate CS concepts into other courses, such as math and science. Access to standalone CS classes often varies by school type and geography, with private and urban schools more likely to offer CS than public and rural schools. This indicates that resources and infrastructure continue to be challenges for schools seeking to expand students' digital skills.

Availability of CS education by country, 2025
Source: AI Index, 2025; Raspberry Pi Computing Education Research Centre, 2024 | Chart: 2026 AI Index report

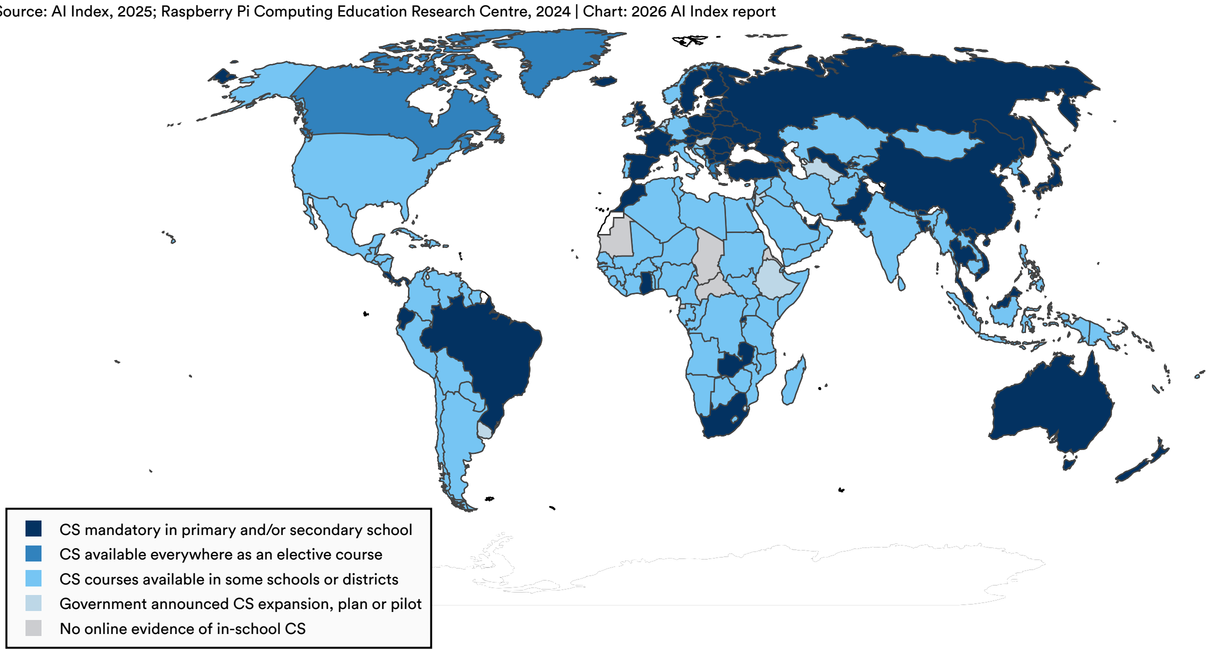


Figure 7.3.19

7.4 AI Skill Acquisition

Formal education is one entry point into AI, but as the technology reshapes jobs across sectors, upskilling and reskilling have become central to lifelong learning. Many people are building AI skills through professional certificates, online courses, and on-the-job experience, pathways that can also broaden access for learners without deep CS or math backgrounds. This section examines where AI skills are concentrated globally and how quickly they are spreading.

AI Skill Penetration

LinkedIn's relative AI skill penetration rate measures how prominently AI skills feature in people's profiles in a given country compared with a global average (Figure 7.4.1). India leads at 3.0, meaning AI skills appear in member profiles at almost three times the global average, followed by the United States at 2.0 and Germany at 1.8. However, these countries also show a persistent gender gap when measuring male and female AI skill penetration rates against the global average (Figure 7.4.2). In India, men list AI skills at more than 1.5 times the rate of women (3.1 vs. 1.9); in the United States, the gap is similar, though a bit more narrow (2.1 vs. 1.4).

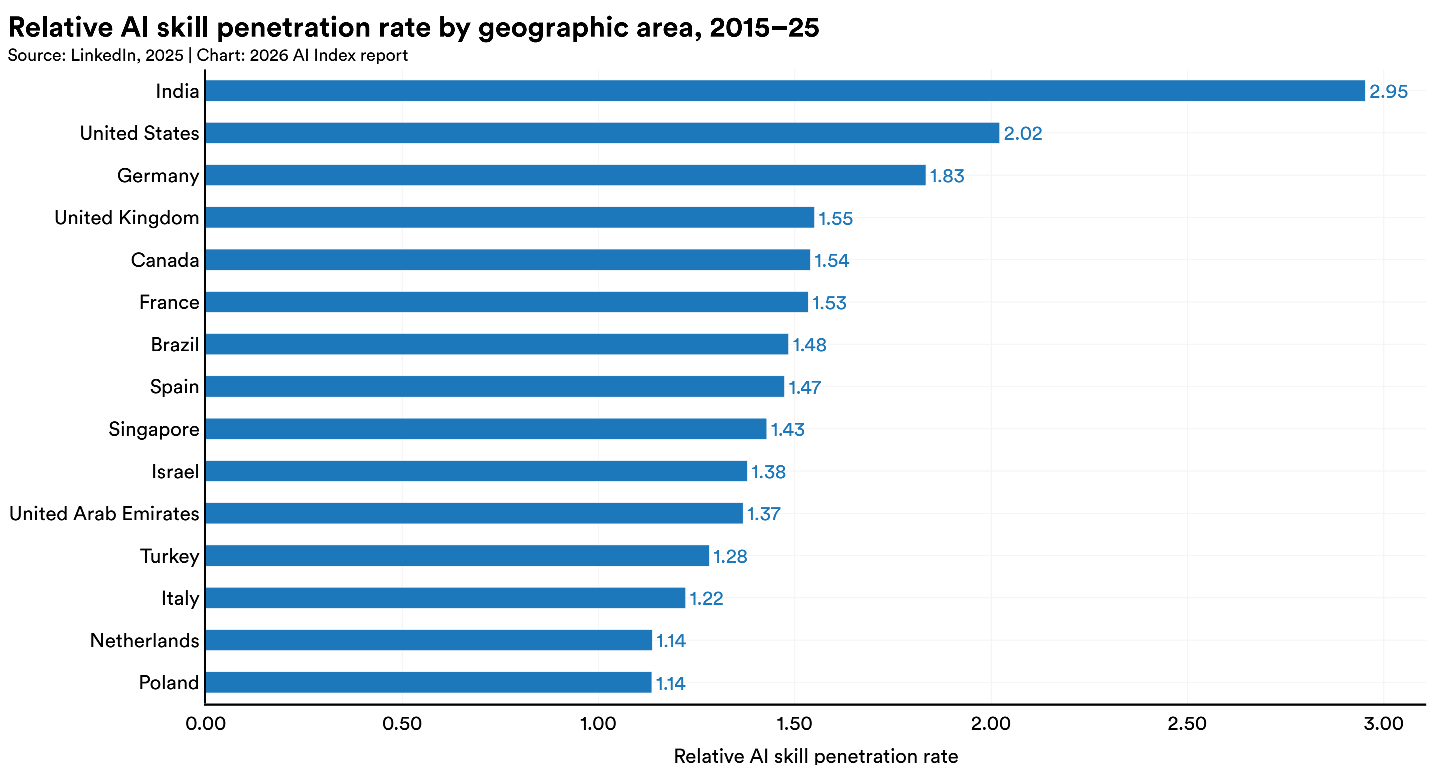


Figure 7.4.1

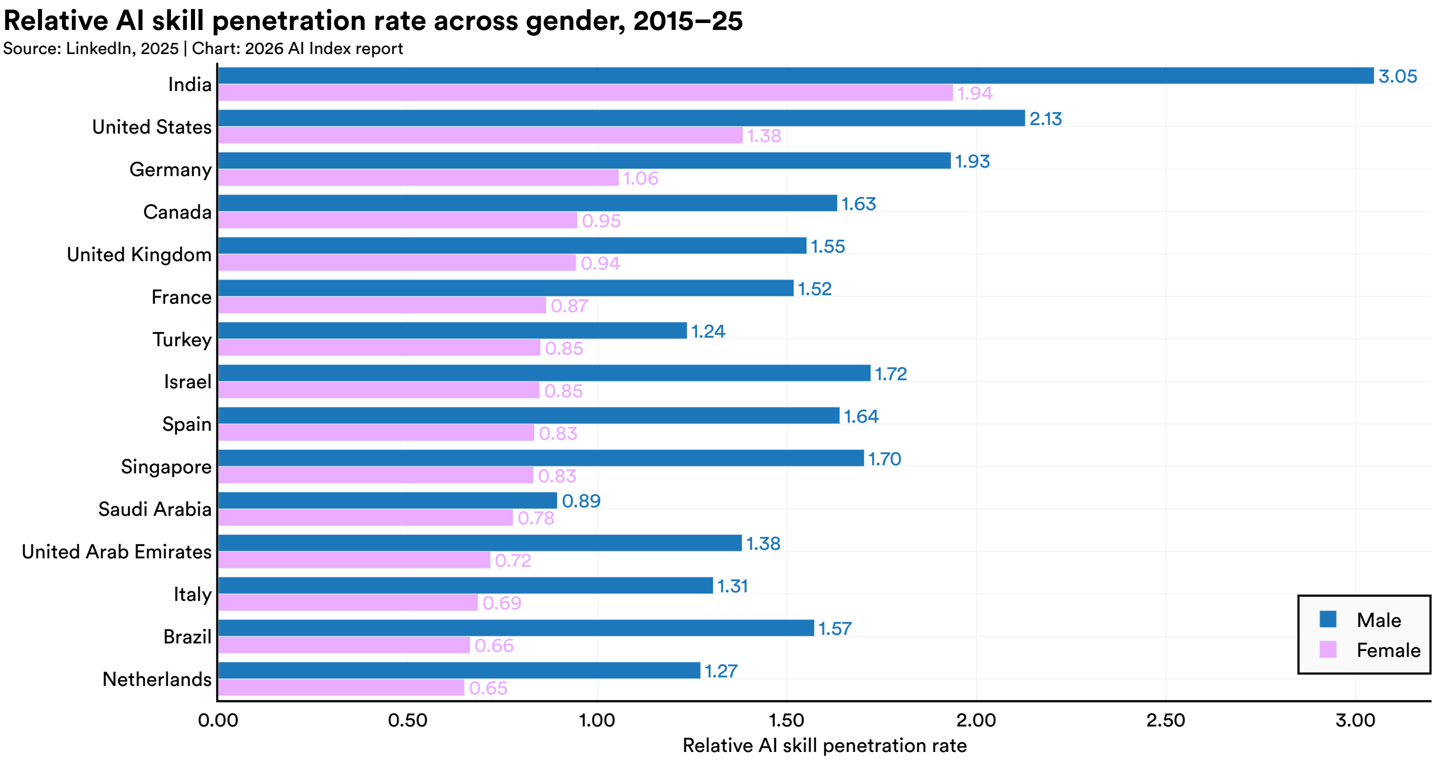


Figure 7.4.2

AI Skills Diffusion

The AI Skills Diffusion Index that LinkedIn introduced this year tracks how much AI skills adoption has grown within a country relative to its own baseline, rather than current relative prevalence (Figure 7.4.3). This measure also accounts for the diversity of AI skills, distinguishing between AI engineering skills, which relate to building and deploying AI systems, and AI literacy skills, which reflect a familiarity with AI-enabled tools. Across many of the countries in the sample, both AI literacy and engineering show recent increases, but the pace differs. AI literacy skills show steeper growth, while engineering-oriented skills have increased more modestly. This is the case for India and the United States. However, countries such as the United Arab Emirates, Chile, and South Africa show rapid growth in AI engineering skills. In the United States, the fastest growing literacy skills were AI prompting and Microsoft Copilot Studio, while the fastest growing engineering skills were AI agents, AI productivity, and AI strategy (Figure 7.4.4).

AI Skills Diffusion Index by geographic area, 2016–25

Source: LinkedIn, 2025 | Chart: 2026 AI Index report

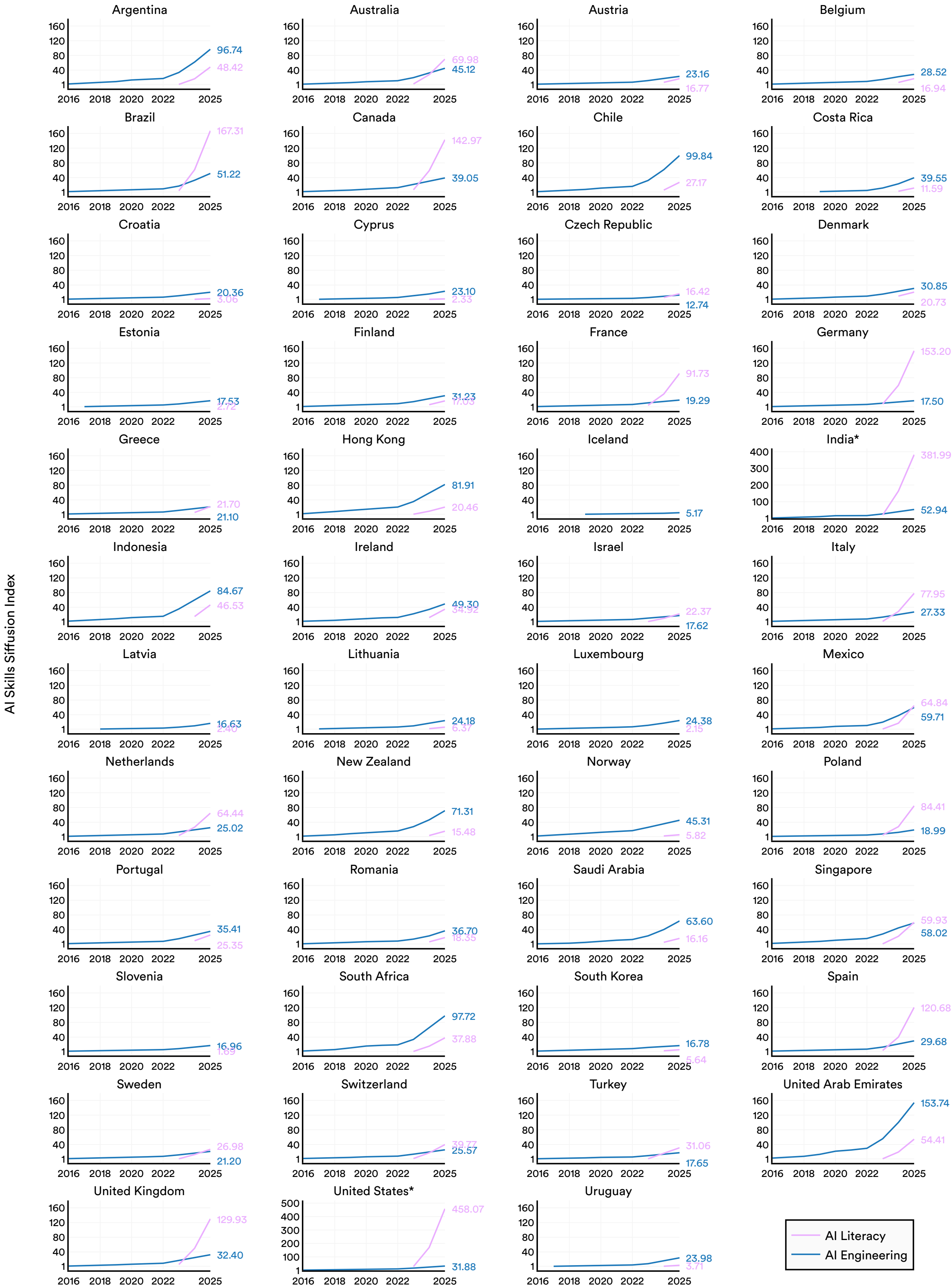


Figure 7.4.3[15]

15 Asterisks indicate that a country's y-axis label is scaled differently than other countries'.

Fastest growing AI skills in the United States, 2025

Source: LinkedIn, 2025

Rank	AI engineering skills	AI literacy skills
1	AI agents	AI prompting
2	AI productivity	Microsoft Copilot Studio
3	AI strategy	GitHub Copilot
4	Amazon Bedrock	Prompt engineering
5	Large language model operations (LLMOps)	Microsoft Copilot

Figure 7.4.4