DataScience4
everyone

Data Science and Data Literacy K-12 Education in the United States

Data science education opens doors to higher education, high-paying careers, an engaged community, and a thriving democracy. Despite the universal presence of data in our daily lives, **the vast majority of today's students will graduate from high school unequipped with the data science and data literacy skills they'll need to succeed in an increasingly data-driven world.**

What data science is:

- Data science is an interdisciplinary field of study that uses **concepts and tools from statistics, computer science, and mathematics** to ask and answer questions using data.

Why data science education matters:

- Nearly **1 in 4** **job postings require data science skills** — from manufacturing to agriculture to transportation.

- As data skills become increasingly essential, **our K–12 education system has not kept pace**: recent results from national assessments like NAEP show a significant decline in students' performance in foundational data analysis, statistics, and probability.

- **Other nations are investing heavily in data science education** pathways from primary through tertiary education while the U.S. is falling further behind.

What we know about data science education in the United States:

- **Only 3% of K-12 students** in the U.S. were enrolled in a dedicated data science course or a course that included a data science content module during the 2022-23 school year.

- **Policies set by state education agencies and boards of education** determine the way and extent to which data science is introduced as a subject in classrooms.

- **DS4E is developing the first grade-by-grade progression for U.S. K-12 data science education**, an important bridge between the learning standards adopted by state boards of education and the lessons teachers deliver in classrooms. The first iteration will be released in February 2025.

How you can help:

- **Engage Your Community:** Share the importance of integrating data science into education with your school board, parent-teacher association, local educators and policymakers.

To learn more, read our full State of the Field report or contact Data Science 4 Everyone (info@datascience4everyone.org).