

From Classroom to Career: Why Data Science?

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What is data science?

In today's data-driven world, the ability to understand and use information is essential, not just for technical careers, but for everyday decision-making. Data science combines math, statistics and digital tools to help us make sense of the world, solve problems and communicate effectively through data. Yet, most students don't have access to these critical skills. Every student, regardless of their future path, deserves the opportunity to learn how to read, analyze and communicate data.

Math is the natural starting point for introducing data science in K-12 education because it provides the structure and reasoning skills students need to begin working with data meaningfully. To prepare students for the demands of the modern economy, data science must become a core part of every student's education.

Data Science

Develops strong math proficiency by:

- Connecting math to students' lives,
- Promoting perseverance in math and data-rich learning tasks,
- Seeing math as sensible, useful and worthwhile and
- Strengthening math pathways.

Strengthens workforce readiness by:

- Aligning to the [78% of employers](#) that seek candidates with strong financial, data science and foundational math skills,
- Building critical thinking skills and
- Promoting real-world application.

Why does data science matter?

Nearly [one in four jobs](#) today requires some level of data science skills and that number is growing. Employers are prioritizing these skills, offering up to [14% higher salaries](#) for workers who can analyze, interpret and communicate with data. Since 2011, the fastest growing careers have consistently been in the most data-intensive fields. However, this isn't just about specialized technical roles. Being able to understand data, spot trends, make good decisions and communicate findings are now essential skills everyone needs.

Data Science in Everyday Life

- Analyze health data
- Make financial decisions
- Track healthy lifestyles
- Understand polling and election results
- Adjust and personalize instruction

Data Science in Careers

- Agriculture, forestry, fishing & hunting
- Banking, finance & insurance
- Education
- Healthcare
- Manufacturing

Data Science in Unexpected Places

- Media
- Music
- Retail
- Sports
- Utilities

How can states strengthen students' access to data science?

Policymakers should consider three key actions to accelerate data science progress:

1. **Modernizing K-12 Math Standards:** Begin by integrating data science into K-12 math then expand to other content areas, such as science, history and civics, where data science enhances content understanding and critical thinking.
2. **Invest in Professional Learning:** Teachers are central to this effort. Provide sustained, high-quality, evidence-based professional development so educators gain the knowledge and skills necessary to teach data science effectively. This includes helping teachers use student learning data to inform instruction and personalize learning.
3. **Fund Pilot Programs:** Support innovative pilot programs that bring data science to life through hands-on, real-world learning experiences. These programs can connect classroom learning to local industries, which makes data science relevant and engaging. [Check out Utah's Data Science Pilot experience.](#)

These actions will strengthen students' data science knowledge and skills to understand, analyze and communicate with data. With nearly one in four jobs requiring data science skills and employers offering significant wage premiums for them, this is not just about education – it's a smart investment in our economy and our future.

Learn More

ExcelinEd's [Comprehensive Model Math Policy](#) and [Resources](#)

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