



## B.S. Data Science

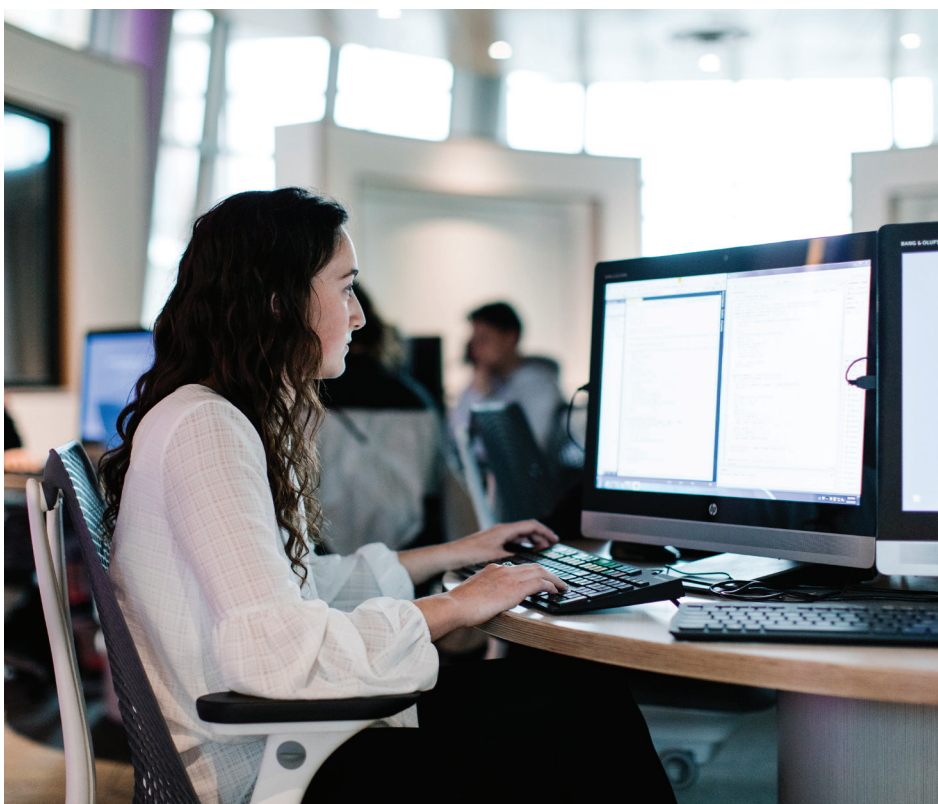
The data science major equips students with the computational and analytical skills required to solve complex, data-driven problems across various disciplines. It integrates foundational knowledge in mathematics, statistics, and computer science with advanced topics in data analysis, machine learning, and data visualization. The curriculum also includes practical applications and a wide variety of real-world datasets that will prepare students for graduate education and employment in a variety of industries.

### What You Will Study

Interdisciplinary in structure, the major combines critical skills gained from studying mathematics, computer science, and statistics with practical application opportunities. The bachelor of science degree program requires 15 courses for a total of 48–50 credits. Courses in the program include Data Science Fundamentals, Machine Learning, Applied Regression Analysis, and Statistics Methods for Data Science. Students learn to analyze large datasets and make evidence-based decisions. They also are trained to critically evaluate the real-world contexts that give rise to the datasets as well as the societal, ethical, and philosophical impacts of their analyses. This approach fosters well-rounded graduates capable of tackling complex challenges.

### A Field in High Demand

The job market for data scientists is experiencing rapid growth. According to the U.S. Bureau of Labor Statistics, employment for data scientists is projected to increase by 36% between 2023 and 2033. This rise reflects the growing importance of data-driven decision-making across industries such as healthcare, finance, and technology.



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# INTERDISCIPLINARY MAJOR

Drawing from the methods of multiple disciplines, such as mathematics, computer science, statistics, ethics, and psychology, the data science major emphasizes critical thinking, creativity, and problem-solving.

## Program Outcomes

### Data Literacy and Critical Thinking:

Graduates understand the role of data in society and are able to analyze its impact on decision-making, innovation, and societal values.

### Mathematical and Computational Proficiency:

Graduates apply statistical and computational techniques to solve problems, using advanced methods such as machine learning and statistical modeling.

### Data Analysis and Visualization:

Graduates effectively use data analysis techniques and visualization tools to explore datasets and communicate insights clearly.

### Problem-Solving and Application:

Graduates demonstrate the ability to define and address complex problems through data-driven approaches, providing actionable insights and solutions.

### Ethical Responsibility:

Graduates recognize and address ethical challenges in data science, ensuring responsible use of data.

## Potential Occupations

Data Analyst or Scientist • Software Engineer • Business Intelligence Analyst  
AI/Machine Learning Engineer • Database Administrator • Data Engineer  
Healthcare or Sports Analyst • Data Research Scientist • Statistician

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