



Undergraduate Program Data Science



The University of Iowa offers a B.S. Program in Data Science

The B.S. in data science produces graduates with the sophisticated analytical and computational skills required to thrive in a quantitative world where new problems are encountered at an ever-increasing rate. The major emphasizes the statistical/probabilistic and algorithmic methods that underlie the preparation, analysis, and communication of complex data. With focus on technical foundations, the data science program promotes skills useful for creating and implementing new or special-purpose analysis and visualization tools. It also promotes a fundamental understanding of how to best handle uncertainty when making data-driven decisions.

Students develop data preparation skills including writing software to obtain, extract, merge, clean, and/or transform the raw data. Analysis or information extraction methods include machine and statistical learning, statistical modeling and inference, and algorithm efficiency analysis. Data visualization, report writing, and oral presentations are important communication methods. The major includes two capstone courses that emphasize communication, ethics, and teamwork.

For more information contact us at: data-science@uiowa.edu
or www.stat.uiowa.edu or 319.335.0712

Sample Schedule

(not including General Education requirements)

Year 1, Fall

- MATH:1850 Calculus I

Year 1, Spring

- MATH:1860 Calculus II
- CS:1210 Computer Science 1
- MATH:2700 Introduction to Linear Algebra

Year 2, Fall

- STAT:2010 Statistical Methods and Computing
- CS:2210 Discrete Structures
- STAT:3100 Introduction to Mathematical Statistics I

Year 2, Spring

- CS:2230 Computer Science II: Data Structures
- STAT:3101 Introduction to Mathematical Statistics II

Year 3, Fall

- STAT:3200 Applied Linear Regression
- CS:3330 Algorithms

Year 3, Spring

- STAT:4580 Data Visualization and Data Technologies
- CS:4400 Database Systems

Year 4, Fall

- STAT:4520 Bayesian Statistics
- STAT:4540 Statistical Learning
- STAT:4880 Data Science Cr. Comp

Year 4, Spring

- STAT:3210 Experimental Design
- CS:4440 Web Mining
- STAT:4890 Data Science Practicum