An interdisciplinary program, our data science major responds to an ever intensifying societal demand for expertise in the management and analysis of data. An exponential growth of data, in the forms of text, numerical information, graphs, and images has occurred within virtually every academic discipline and in all aspects of life. Students pursuing a major in data science can choose from three tracks: finance and economics; statistics; and computer science.

**TRACKS IN DATA SCIENCE MAJOR:**

- The Statistics track focuses on advanced data analysis techniques and programming within a mathematically rigorous framework.
- The Computer Science track focuses on computing theory and computational strategies, including relational database systems, data structures, artificial intelligence, and machine learning.

**PROFESSORS:**

Sugata Banerji specializes in computer vision, machine learning, and artificial intelligence.

Arthur Bousquet specializes in applied mathematics, with emphases in scientific computing and numerical analysis.

Andrew Gard specializes in applied mathematics, with emphases in modeling and optimization.

Muris Hadzic (Department of Economics, Business, and Finance) specializes in financial economics, asset pricing, textual analysis in finance, and quantitative finance.

Craig Knuckles specializes in software engineering, database-driven web applications, Linux system administration, and statistical computing.

DeJuran Richardson specializes in biostatistics, with emphases in the design, conduct, and analysis of clinical trials and health disparities research.

**DATA SCIENCE MINOR:**

The data science minor is designed to allow easy entry for students with no prior exposure to statistics or computer science. It can be completed within the first two years of college study. In this way, students with majors in the humanities, social sciences, and/or natural sciences can acquire data analytic expertise. Data management, visualization, and analysis techniques, coupled with computer programming fundamentals, provide students with a skill set that is increasingly in demand by a wide variety of employers.

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**GEORGE “FENN” NAPIER ’20**

**Hometown:** Burlingame, California  
**Majors:** Computer Science and Neuroscience  
**Awarded:** James Rocco Quantitative Data Research Scholarship  
**Research Project:** Applying machine learning and statistical algorithms on the human genome to predict colorectal cancer  

Read about Fenn’s path at [lakeforest.edu/napier](http://lakeforest.edu/napier)
INTERNSHIPS AND RESEARCH:
Students have participated in summer research internship programs in biostatistics and bioinformatics at the following universities: University of Wisconsin-Madison • Harvard T.H. Chan School of Public Health • University of Iowa • University of Minnesota-Minneapolis

A sampling of employers who hire our data science students for internships and jobs: Abbot Laboratories • Accenture • Airspace • Wolverine Trading • Vizient, Inc. • WayUp, Inc.

Our data science majors pursue many career paths:

- ACTUARIAL SCIENCE
- BIOINFORMATICS
- BIOSTATISTICS
- BUSINESS INTELLIGENCE ANALYTICS
- DATA ANALYTICS
- DATA MANAGEMENT
- DATA WAREHOUSE ARCHITECTURE
- FINANCIAL ANALYSIS
- MACHINE LEARNING ENGINEERING
- MARKETING ANALYTICS
- OPERATIONS ANALYTICS
- QUANTITATIVE ANALYTICS
- SPORTS ANALYTICS
- STATISTICIAN
- SYSTEMS ANALYTICS

JAMES ROCCO DATA RESEARCH SCHOLARSHIP
The James Rocco Quantitative Data Research Scholarship provides up to $5,000 to support innovative, student-designed quantitative research projects to be carried out during the summer or the academic year. The purpose of the scholarship is to encourage the development of skills in using quantitative methods to derive information from data. This set of skills is increasingly important in many career paths and academic fields.

THE MATHEMATICAL CONTEST IN MODELING (MCM/ICM)
MCM/ICM is an international mathematical modeling competition in which teams, consisting of three students each, analyze and develop a solution to a real-world problem. The competition focuses on collaborative teamwork and ingenuity, and requires students to present their ideas in a clear and concise manner. Students with multidisciplinary interests who are drawn to data applications and tackling practical, real-world, problems are encouraged to join our Lake Forest College team.

Learn about our accomplished faculty, requirements for the major, and more at lakeforest.edu/academics/data