Data science is an exciting new field at the intersection of math, computer science, and statistics. The world is awash in "big data" streaming in from phones and smart devices at massive rates. Data scientists use statistics, machine learning tools, and their own custom software to turn all of that data into useful information that can be used to make predictions and guide decision making.

The Program
At Centre, our majors obtain not only the skill to apply the latest tools in statistics and machine learning, but a solid foundation in math, coding, and problem solving that will enable them to learn and adapt in the years to come. Programming languages and machine learning tools come and go. A deep understanding of the foundational ideas of math, computer science, and data science will pay dividends for years to come. Our courses gradually build on one another, and we have dedicated lab spaces and tutoring services to help students succeed.

Solid Foundation, Supportive Environment
In addition to developing strong analytic and problem-solving skills, Centre students are known for their outstanding communications skills. In each course in our data science program, students gain experience communicating their ideas visually, orally, and in writing. Whether in a one-on-one discussion, a written report, or a poster presentation at a conference, our students learn not only how to solve complex problems, but how to communicate their solutions in ways that others can understand.

Real-World Experience
For majors, the data science program includes a capstone experience in the Fall semester of their senior year. In the capstone, students apply what they have learned in previous courses to a real-world problem in other disciplines. Students propose a project that interests them—in the humanities, the social, physical, or life sciences, or the local community—and then solve a significant data analytics problem. In the capstone, students also learn to present their results at various stages of completion. Students will find that this project provides something exciting to talk about with prospective employers or as they apply to graduate schools. Many students will begin gaining real-world experience even earlier, finding they are in demand for summer internships in industry.

Opportunities for Research
Students who enroll at Centre often are eager for challenges beyond traditional classroom discussion and testing. These students are ready for a new level of discovery, so we provide the opportunity for them to become partners in learning with our faculty both on- and off-campus.
While teaching is our primary passion, the faculty of Centre College is also actively engaged in research. Students in the Data Science program can work alongside faculty in cutting-edge projects on a variety of topics.

MINORING IN DATA SCIENCE
Tapping into the strengths of data science doesn’t necessarily require a major in data science. For students that wish to supercharge their primary major, especially those in sciences from the physical, biological, or social sciences, a minor in data science could be the perfect fit. The minor was constructed to allow students to draw on the skills and techniques of data science to use within their primary major. Minors can expect to spend time not only studying how to use machine learning to find trends, but will couple this with courses from their discipline to correctly run experiments and interpret domain specific data.

For instance, biologists can use what they learned in the data science minor to automate the discovery of genetic similarities between species, historians can send bots to scour the internet to analyze trends in national identity over the past 20 years, and economists can leverage the latest machine learning algorithms to predict the effects of climate changes on local markets.

CAREERS AND GRADUATE STUDY
Data scientists are in great demand. Bloomberg magazine recently called data science “...America’s hottest job,” Harvard Business Review called it “...the sexiest job of the 21st century,” and according to Forbes Magazine “Data Scientist Is the Best Job In America According Glassdoor’s 2018 Rankings.”

Skills learned as a data science major will be valuable assets in almost any career. Some students decide to continue their data science studies in graduate school. Interdisciplinary studies are becoming more important at the graduate level and we now have several alums pursuing masters degrees in data science.

FACULTY
THOMAS E. ALLEN (B.S., Georgia Tech; M.Div., The Southern Baptist Theological Seminary; Ph.D., University of Kentucky), Assistant Professor of Computer Science. Studies computational preferences in the field of artificial intelligence—learning, representing, reasoning with, and aggregating preferences to make and support better decisions.

MICHAEL K. BRADSHAW (B.S., Centre College; M.S., Ph.D., University of Massachusetts-Amherst), Associate Professor of Computer Science. Explores the intersection of gaming and education, more specifically how game elements which encourage engagement can be infused into traditional assignments.

JEFFREY HEATH (B.S., Georgetown College; M.S., Ph.D., University of Maryland), Associate Professor of Mathematics. Investigates problems in sports analytics.

MICHAEL LAMAR (B.S., B.A., M.Sc. Washington University; M.Sc., Johns Hopkins University; Ph.D., Brown University), Assistant Professor of Mathematics. Works on unsupervised learning algorithms for finding structure in high-dimensional data.

FOR FURTHER INFORMATION
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RELATED WEBSITE
Data Science Program Overview

VISIT CENTRE
The best way to judge Centre is to tour the campus, talk to the professors and students, attend a class, and spend the night in a residence hall. We invite you to visit and encourage you to contact the Admission Office if you have any questions.

THE CENTRE COMMITMENT
We back our promise with a deeply engaging and intensely personal education guarantee. If you meet regular academic and social expectations, you will complete all three parts of the Centre Commitment, or the college will provide up to an additional year of study tuition-free.

Centre students will:
• Study abroad
• Have an internship or research opportunity
• Graduate in four years