



Master of Science in
Data Science



Saint Mary's
College

NOTRE DAME, INDIANA

MASTER OF SCIENCE IN DATA SCIENCE

With the MS in Data Science Program at Saint Mary's College, you'll gain the skills and knowledge you need to meet the growing demands in your industry. Whether you're looking to advance your current data science career or pursue new opportunities, our flexible, fully online program will equip you with enduring skills to succeed in this high-paying, fast-growing field.



A woman with glasses is shown in profile, working at a desk with multiple computer monitors. The scene is dimly lit with a blue tint, suggesting a late evening or night in an office or data center. The woman is focused on her work, with her hands on a laptop keyboard. The background shows blurred office equipment and windows.

With our data science degree, you'll become a well-rounded data scientist ready to take on complex data challenges now and in the future,

NO MATTER WHAT INDUSTRY YOU WORK IN.

WHAT YOU WILL LEARN

In our Data Science Master's Program, you'll immerse yourself in a transformative learning journey, acquiring a robust skill set that prepares you to excel in the dynamic world of data analysis and decision-making. Here's a glimpse of what you'll gain:

Analysis of Complex Data Sets

Delve into the world of large, intricate data sets and develop the proficiency to extract valuable insights to solve real-world business challenges.

Application of Computing Resources

Master the art of utilizing computing resources for data analysis. You'll become skilled in programming and industry-standard tool usage, ensuring you're equipped to handle data-driven tasks with finesse.

Actionable Intelligence Generation

Learn to transform data into actionable intelligence that drives informed decision-making across various sectors.

Data Analysis Strategies

Craft and implement effective data analysis strategies grounded in theoretical principles and a deep understanding of underlying data structures.

Effective Communication

Sharpen your ability to communicate complex analysis results to diverse audiences, ranging from non-technical stakeholders to tech-savvy professionals.

Mathematical Rigor

Apply rigorous mathematical principles to dissect and interpret data, enhancing the accuracy and depth of your analyses.

WHAT YOU WILL LEARN

CONTINUED

Technology Solutions

Evaluate, implement, and assess technology solutions that amplify data analysis efficiency and accuracy.

Innovation to Product

Discover the process of transforming innovative data-driven concepts into tangible products and services that have a meaningful impact.

Ethical Practice

Explore ethical considerations in data science, ensuring your analyses and decisions uphold the highest standards of integrity.

Advance Your Skills

Elevate your data science career with specialized training in communication and project management, enhancing your versatility.

Entrepreneurial Acumen

Acquire valuable entrepreneurial business skills, empowering you to navigate the data landscape with a unique edge.

Project Management

Master the art of planning, directing, and evaluating the status of complex data-centric projects, ensuring seamless execution.

Professional Writing Techniques

Hone your professional writing skills, equipping you to effectively convey nuanced analysis results to your audience.

Data Storytelling

Reprocess and visualize data, gaining expertise in data storytelling that breathes life into your analysis outcomes.

Foundational Knowledge

Develop a working understanding of probability, applied statistics, applied linear algebra, computer programming, databases, and systems analysis.

Programming Languages

Learn to use an array of programming languages to process, analyze and visualize data, such as:

- Python
- R/RStudio
- SQL
- D3

APPLICATION REQUIREMENTS

No matter the industry you work in or the one you want to break into, data plays a vital role in guiding it.

We can help you elevate your abilities so you're qualified to do both the in-depth work of data analytics and manage the work of others in the industry.

WHO SHOULD APPLY

College seniors, recent college graduates, working adults, and military personnel who possess any of the following:



Technical Skills



A Passion for Data



Leadership Skills



Computer Programming Experience



Familiarity with Mathematics and Statistics

APPLICATION REQUIREMENTS FOR MASTER OF SCIENCE IN DATA SCIENCE

1

Bachelor's degree in mathematics, business, computer science, information systems, the sciences, health science, quantitative social science or related field; the most competitive candidates will have at least a 3.0 cumulative GPA in undergraduate coursework.

2

A bachelor's degree from a regionally accredited school, or the international equivalent.

3

Official transcripts from your degree-granting institutions.

4

Relevant work experience in a technical or quantitative area.

5

Current résumé or Curriculum Vitae.

6

One letter of recommendation.

7

Personal statement.



HOW TO STRENGTHEN YOUR APPLICATION

If You're in School:

- Take additional classes in quantitative disciplines
- Required prerequisites: elementary linear algebra, introductory statistics, calculus 1 and 2
- Suggested electives: calculus 3, probability theory, differential equations, additional statistics
- Explore computer programming, particularly Python
- Engage in leadership opportunities
- Gain practical experience through internships
- Build relationships with your professors to secure letters of recommendation

If You're in the Workforce:

- Brush up on your algebra, calculus, and statistics
- Explore computer programming, particularly Python
- Continue developing your leadership skills
- Reconnect with professors and former supervisors to secure letters of recommendation

PREREQUISITES AND CORE COMPETENCIES

The most competitive candidates will satisfy the prerequisites and core competencies as follows:

- A quantitative undergraduate major (examples include but are not limited to mathematics, the sciences, social sciences, and business with a quantitative emphasis) or a career in a technical or quantitative area
- One semester of calculus preferred
- Familiarity with computer programming
- Familiarity with statistics
- Familiarity with linear algebra

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I am passionate about telling stories with data, especially creating visualizations. The online format fits well with my life and I love the flexibility.

Beth Stockton
2022 GRADUATE

4+1 DATA SCIENCE

At Saint Mary's, current students can earn a bachelor's degree and master's degree in just five years.

If admitted to the master's program, students will take two (2) graduate level courses in the Data Science program while in your senior year allowing you to earn up to six (6) credits towards your graduate degree while still finishing your undergraduate degree.

The applicants can apply during their current second semester junior first semester senior year.

- Completed application form
- A personal statement that describes how the experiences in your life make you ideally suited to become a data scientist
- Official transcripts
- Completion of prerequisite courses
- Contact information for an academic reference *(waived for current Saint Mary's students)*
- Prerequisite courses
- Calculus I
- Calculus II
- Statistics
- Computer Programming
- Linear Algebra (or equivalent)
- *One graduate Data Science course
- *Only for those applying in fall semester of the senior year

**Candidates who meet some but not all of the prerequisites and core competencies are encouraged to apply and will be considered conditionally. The Program Director can identify opportunities for those candidates to gain familiarity in the relevant area(s).*

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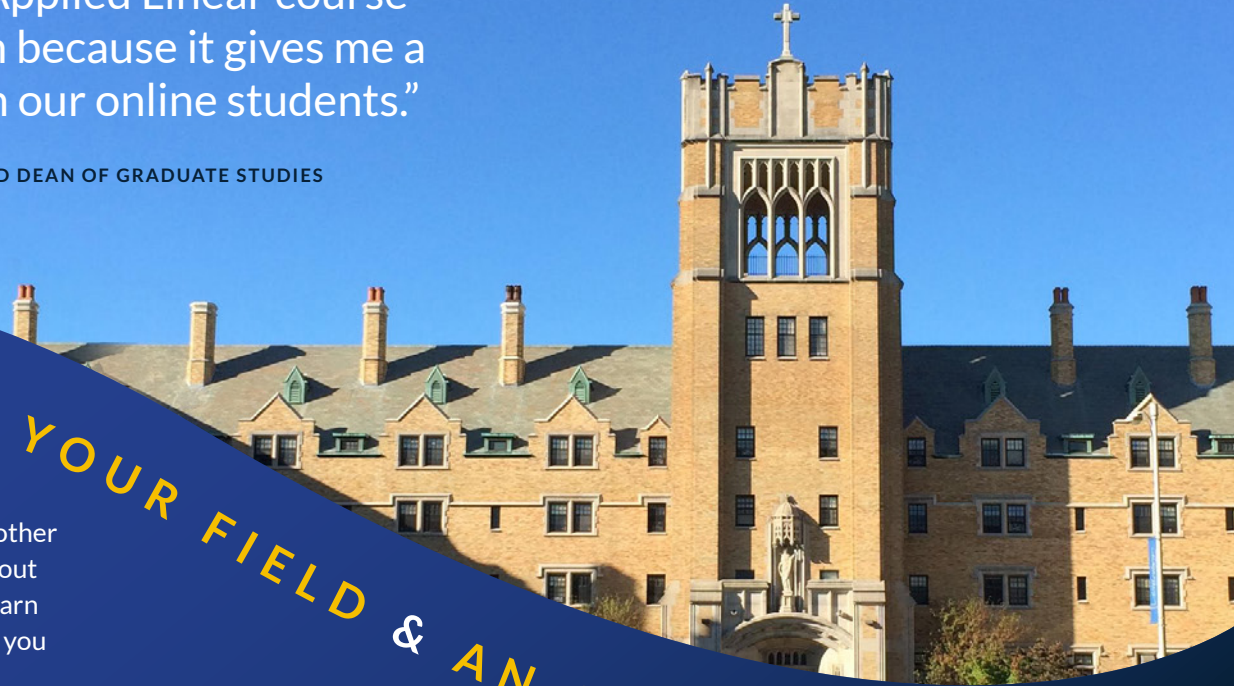
I really enjoy teaching the Applied Linear course in the data science program because it gives me a chance to work closely with our online students.”

Dr. Colleen Hoover - ASSOCIATE PROVOST AND DEAN OF GRADUATE STUDIES

BECOME TOP OF YOUR FIELD & AN AGENT OF CHANGE

At Saint Mary's, you'll join a tight-knit, caring community that is committed to helping each other and making a difference in the world. Throughout your Master of Data Science program, you'll learn from industry experts and receive the support you need to succeed in the classroom and beyond.

Saint Mary's provides you with the tools and confidence needed to be at the top of your field and to become an agent of change.



OUTCOMES - DATA SCIENTISTS MEDIAN SALARY

\$100,910

AVERAGE DATA
SCIENTIST SALARY
IN 2021

\$130,770

BEST-PAID DATA
SCIENTIST SALARY
IN 2021

36%

JOB OUTLOOK GROWTH
ACCORDING TO BUREAU
OF LABOR STATISTICS

13,500

OPENINGS FOR DATA
SCIENTISTS ARE PROJECTED
EACH YEAR ON AVERAGE



DATA SCIENTISTS ARE IN DEMAND.



\$0

Is the amount your tuition will increase from term to term as long as you remain enrolled in the program.

CREDITS REQUIRED TO GRADUATE: 36

By entering a graduate program, you are investing in your future. We understand navigating the financial aid process for a graduate degree can be overwhelming.

To make sure you reach your goals, we will help you identify various funding sources, analyze repayment options, and provide you with tools to establish a budget, estimate costs, and plan for your future.

Tuition for the fall 2023 entering class is **\$910** per credit hour and the total price of program is approximately \$33,000. For a breakdown of all associated costs and more financial aid information, visit www.saintmarys.edu/graduate-studies.

Information and statistics portrayed in this publication are current as of print date.

SCHOLARSHIPS AVAILABLE



DATA SCIENCE SCHOLARSHIP

This scholarship is available to incoming data science students based on academic potential and financial need. The \$1,500 annual scholarship will be divided equally by term (\$500 per term) and is renewable for the second year. Students must be in good standing for automatic renewal.

LILLY ENDOWMENT SCHOLARSHIP

This scholarship is available to incoming or returning data science students who are from Indiana or recently attended college in Indiana. Up to \$2,100 may be awarded annually to an individual and the award will be divided equally across terms. Scholarship recipients may reapply for this scholarship for their second year.



Want to learn more about the Data Science program?

Saint Mary's should be your top choice for a Data Science degree.

CONNECT WITH US

You can chat with us via email, video chat, or phone call.

We are here to help you.



PHONE

(574) 284-5098



EMAIL

graduateadmission@saintmarys.edu



DATA SCIENCE HOMEPAGE

<https://www.saintmarys.edu/graduate-studies/data-science>



ADDRESS

Office of Graduate Studies
Notre Dame, IN 46556



WEBSITE

www.saintmarys.edu/graduate-studies



DATA SCIENCE APPLICATION REQUIREMENTS

<https://www.saintmarys.edu/graduate-studies/data-science/application-requirements>