



UNIVERSITY OF WISCONSIN  
**DATA SCIENCE**

# FIND YOUR FUTURE IN DATA

Earn a University of Wisconsin Master of Science in Data Science Online

## MASTER'S DEGREE OVERVIEW

The world generates data at an astonishing rate—about 2.5 quintillion bytes each day. Across the country, employers are racing to hire professionals who know how to extract meaning from and interpret data. With this in mind, we created the University of Wisconsin Master of Science in Data Science in an online format ideal for busy adults like you who want to advance in or enter the data science field but don't have time for on-campus courses.

In this 12-course, 36-credit master's program, you will learn the latest tools and analytical methods you need to be able to clean, organize,

analyze, and interpret unstructured data before communicating your discoveries clearly to stakeholders using sophisticated visualization techniques and other means.

The Master of Science in Data Science isn't a niche degree. We understand that well-rounded data professionals are the ones who remain in high demand as new challenges and business needs arise. That's why you will leave the program with a respected UW graduate degree that applies to any area of data science and provides valuable skills in strategic thinking, communication, and management that apply across industry sectors.

## AN INTEGRAL ADVISORY BOARD

The UW Data Science program partners with an advisory board of industry professionals dedicated to helping students bridge the gap between classroom learning and real-life data science challenges. Their continual input helps ensure course content meets today's employer needs in this rapidly evolving field—and that graduates make a smooth transition into the workforce. Our advisory board is made up of professionals from organizations such as American Family Insurance, the State of Wisconsin Department of Children and Families, CUNA Mutual Group, Hospital Sisters Health System, Ipsos, and more.

# A UNIVERSITY OF WISCONSIN EDUCATION

## STAND OUT WITH AN IMPRESSIVE CREDENTIAL

Where you earn your degree matters. University of Wisconsin institutions are among the most recognized and respected in the country. Upon graduation, you will receive your Master of Science from one of six University of Wisconsin campuses: UW-Eau Claire, UW-Green Bay, UW-La Crosse, UW-Oshkosh, UW-Stevens Point, or UW-Superior. Your degree and transcripts will be identical to those earned by on-campus students.

## LEARN FROM EXPERT UW FACULTY

All UW Data Science master's courses are developed and taught by the best and brightest faculty from across the UW System. Their diverse yet complementary specialties—in statistics, information systems, business management, mathematics, economics, communications, and more—have been infused into courses. The result is a truly multidisciplinary curriculum.

## ENJOY A FLEXIBLE EDUCATION

Though this is an online program, UW Data Science advisers and faculty are just an email or phone call away. You never have to set foot on campus, but you're free to visit or use campus resources such as career assistance and libraries whenever you like. Students often say the online format is a natural fit and a big factor in their ability to earn a degree while balancing work and family responsibilities.

## GAIN SKILLS YOU CAN USE EVERY DAY

Working with data is highly technical. The UW Data Science curriculum provides expertise in specialized technical areas such as data mining and warehousing, predictive analytics, statistical modeling, database infrastructures and data management, machine learning, and analytics-based decision making. Our curriculum also incorporates data ethics, communication, and management techniques—skills that can apply to any industry and help you advance to and succeed in leadership positions.



"I want to be on the cutting edge. That's what brought me to the UW Data Science program. I'm an IT manager in manufacturing—an industry that is changing drastically. It's producing tremendous amounts of data, and I see many opportunities to analyze the data for improvements and automation."

– Nicholas Sondelski, student

# CURRICULUM

---

The UW Data Science curriculum is designed and taught by the same UW faculty who teach on campus. You will take 11 courses online, plus a capstone course completed at a real worksite. Your coursework will require you to use the Virtual Lab, which lets you remotely access dozens of tools such as R, Python, SQL Server, and Tableau. See course descriptions at [datasciencedegree.wisc.edu](https://datasciencedegree.wisc.edu).

Foundations of Data Science

Statistical Methods

Programming for Data Science

Data Warehousing

Big Data: High-Performance Computing

Communicating about Data

Data Mining

Visualization and Unstructured Data Analysis

Ethics of Data Science

Prescriptive Analytics

Data Science and Strategic Decision Making

Capstone

# CAPSTONE

---

For the final course, the capstone experience, you will apply what you've learned in the program to develop a project and get hands-on experience at a real workplace. Each project is tailored to a student's interests and career goals and often leads to job opportunities and professional connections.



# CAREERS

---

Data scientists work in virtually every industry, including healthcare, computer science, retail, marketing, manufacturing, transportation, communication, education, insurance, finance, science, security, and law enforcement. Companies such as Facebook, Amazon, IBM, Kayak, Capital One, and *The New York Times* clamor for those who can drive business intelligence using vast and complex data.

And yet, there is a shortage of data science professionals. According to a recent Accenture report, 41 percent of employers say lack of talent is a major obstacle to implementing big data projects. McKinsey Group reports that, in the U.S., demand for deep analytical talent could be 50 to 60 percent greater than its projected supply by 2018. Because of this, the career outlook for data professionals is bright.

Many who work with big data are known as data scientists, although they may also be called data analysts or business analysts, or have other titles. The national average salary for data scientists is \$113,436, according to Glassdoor.

