

FROM DATA TO AI-DRIVEN IMPACT

Benefit from a 30-credit curriculum designed to build in-demand skills that you will apply to real-world challenges. Launch your career in the AI era.

BUILD YOUR DATA SCIENCE SKILL SET

01 Foundational Essentials

Build your programming and statistical foundation

COURSES

- DTSC 610: Programming for Data Science
- DTSC 620: Statistics for Data Science

KEY SKILLS YOU'LL BUILD

- Foundational programming in Python and R
- Data structures, manipulation, and preparation
- Statistical reasoning, hypothesis testing, and inference
- Early data science techniques: clustering, regression, classification, and visualization

WHAT YOU CAN DO

Clean, organize, and explore large datasets. Evaluate whether data patterns are meaningful and reliable. Prepare data for analysis and future machine learning applications.

RELEVANT ROLES

Data Analyst | Analytics Associate | Junior Data Scientist | Business Intelligence Analyst

02 Modeling & Data Systems Essentials

Learn to build predictive models and manage large-scale data

COURSES

- DTSC 710: Machine Learning
- DTSC 701: Introduction to Big Data

KEY SKILLS YOU'LL BUILD

- Applied machine learning: classification, clustering, and feature selection
- Predictive modeling, anomaly detection, and pattern recognition
- Large-scale data acquisition, storage, management, and analytics
- Big-data platforms, workflows, and computing solutions

WHAT YOU CAN DO

Build models that predict user behavior, identify anomalies, and support intelligent decision-making. Design scalable workflows for collecting, storing, and preparing large volumes of data for analytics.

RELEVANT ROLES

Data Scientist | Machine Learning Analyst | Predictive Modeling Analyst | AI Analyst | Data Engineer | Analytics Engineer

03 Specialization

Go deeper in high-demand AI domains

COURSES

- DTSC 740: Deep Learning
- CSCI 657: Introduction to Data Mining

KEY SKILLS YOU'LL BUILD

- Neural networks, convolutional and recurrent networks
- Deep unsupervised learning and reinforcement learning
- Computer vision and speech recognition applications
- Data warehousing, OLAP, social network analysis, and web mining

WHAT YOU CAN DO

Develop and evaluate models that classify images, recognize speech, or detect patterns in sequential data. Analyze web behavior, customer segments, and multimedia data to extract useful insights.

RELEVANT ROLES

AI Analyst | Machine Learning Specialist | Computer Vision Engineer | Data Mining Analyst

04 Application

Communicate insights and drive decision-making

COURSE

- DTSC 630: Data Visualization

KEY SKILLS YOU'LL BUILD

- Data visualization principles from graphic design, psychology, and cognitive science
- Effective presentation of complex datasets and model results
- Dashboard design and development
- Translating technical analysis into stakeholder-friendly insights

WHAT YOU CAN DO

Build dashboards that visualize predictive model results, trends, anomalies, and audience segments. Make technical AI and data science work more usable, transparent, and actionable.

RELEVANT ROLES

Data Visualization Specialist | Business Intelligence Analyst | Analytics Consultant

Career Outcomes

Step into high-demand roles shaping the future



AI & MACHINE LEARNING

- AI Analyst
- ML Specialist
- Machine Learning Engineer



GENERATIVE AI & LLM

- Generative AI Specialist
- LLM Application Analyst
- Prompt Engineer



PRODUCT & STRATEGY

- AI Strategy Analyst
- AI Product Analyst
- Analytics Consultant



TECHNICAL ROLES

- AI Engineer
- Big Data Engineer
- AI Model Developer



ANALYTICS, BI, & RISK

- Business Intelligence Analyst
- Risk Analytics Analyst
- Fraud Detection Analyst
- Data Visualization Specialist



Become AI-Ready in
as Few as 10 Months

EXPLORE DATA SCIENCE CAREERS →

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