

Data Science



Data science is a rapidly emerging discipline that prepares you to collect, clean, organize, provide access to, analyze, and communicate data. It is a combination of computer science, databases, ethics, mathematics, and statistics at its core. You will ultimately learn to apply these skills to multiple other domains such as art, biology, business, climate, health, humanities, oceanography, science, social science, and more. (<https://web.uri.edu/cs/academics/data-science/>)

Companies and organizations are employing professionals in the field of data science to make sense of the massive amounts of data that can be collected and analyzed in order to derive insights and make strategic decisions. Based on this, the Bureau of Labor Statistics projects data science related careers will grow 33.8% from 2016 to 2026. The data science domain incorporates many elements including data analytics, data mining, machine learning, data modeling, and artificial intelligence (AI).

To prepare for a career in data science it is important to develop relevant technical and interpersonal skills, apply what you learn through project work and internships, connect with peers and professionals in the field, and engage in continuous learning and education. Evolving technology, in addition to changing demands regarding the analysis and application of data insights, makes this an exciting and challenging career field.

Areas of Opportunity



Data Analytics, Machine Learning, Artificial Intelligence, Data Engineering, Big Data Hardware, Data Mining, Database Management and Architecture, Business Intelligence and Analytics, Software Development, Statistical Analysis, Health Informatics, Predictive Modeling, Bioinformatics, Applied Research Engineering, Data Visualization and Presentation, Cloud and Distributed Computing

Common Employers



Manufacturing and Consumer Products Companies
Financial and Banking Firms
Software and Technology Firms
Local, State and Federal Governments
Healthcare Systems and Organizations
Public and Private Schools, Educational Consultants
Transportation Agencies
Entertainment Companies
Supply Chain and Retail Organizations
Hospitality Sector
Telecommunications Entities
Real Estate Agents and Marketplace Companies
Insurance Companies

Professional Organizations



ADaSci – The Association of Data Scientists
ASA – American Statistical Association
WiDS – Women in Data Science
DASCA – Data Science Council of America
DSA – Data Science Association
ACM – Association for Computing Machinery
INFORMS – Institute for Operations Research and the Management Sciences
DAA – Digital Analytics Association
AAAI – Association for the Advancement of Artificial Intelligence
ADSA – Academic Data Science Alliance
IIA – International Institute for Analytics
IDEAS – International Data Engineering and Science Association



Strategies on Entering the Field

- Obtain education and training in the following areas: statistics, linear algebra, calculus, programming, databases, distributed computing, machine learning, visualization, experimental design, clustering, deep learning, and natural language processing.
- Acquire relevant technical experience through internships, part-time work, and co-ops.
- Develop foundational skills such as problem solving, critical thinking, communication, curiosity, adaptability, and teamwork.
- Explore resources such as LinkedIn to connect with data science professionals and learn about companies, industries, skills needed to succeed in the field.
- Engage in projects to apply skills and knowledge within practical settings.
- Create a resume that highlights your skills and experience related to data science, your specific technical skills, project work, and your unique qualifications.
- Complete relevant online courses and professional certification to enhance your skills and qualifications throughout your career.