



# Data Science Bootcamp

Data science is the study that combines domain expertise, programming skills, and knowledge of math and statistics to extract meaningful insights from data. The practitioners apply machine learning algorithms to numbers, text, images, video, audio, and more to produce artificial intelligence (AI) systems that perform tasks which ordinarily require human intelligence. In turn, these systems generate insights that analysts and business users translate into tangible business value.

## Bootcamp Curriculum Overview

The Northeastern Illinois University data science bootcamp is a job-ready training that truly masters you in the data science field within 26 weeks. The Bootcamp program is rigorous and packed with challenges covering concepts, theories and projects; but you will have all the help needed to navigate through the process in the form of academic counselling, mentor office hours and assessments.

It's a 7-month program in which students are expected to spend 15 to 25 hours a week to master the material. Graduates of this program will learn critical skills for data analytics related jobs and will have access to career services throughout the program.

### Invest in acquiring the required skills\*

The field of data science is quite dynamic, and the required skills are changing quite rapidly. Companies like Apple, Walmart, Amazon, Exxon Mobil and a lot more besides are looking for professionals to help them strengthen their capacities in diversified data analytics tools and coding languages. To become eligible for a job at these companies, it is crucial to know which skills are in demand. Our bootcamp program is scrutinize and design with the right combination of tools and skills as listed below.

- Transact-SQL
- Excel
- Power BI
- Data Visualization
- Python
- R Programming
- Machine Learning
- Spark
- Azure HDInsight
- Predictive Analytics

### Jobs You Will Be Ready For

Here is a list of real-world jobs that you can apply this bootcamp to:

- Data Analyst
- Data Engineer
- Data Scientist
- Data Science Manager
- Business Analyst
- Data Analytics Engineer
- Data Strategy Manager
- Business Intelligence Analyst
- Business Intelligence Manager
- Business Insights Analyst
- Business Insights Manager

## Data Science Bootcamp Structure

Throughout the 7 months of this program you will go through lecture videos and a variety of individual exercises and group discussions, both in online self-paced format as well as weekly live instructor hours. Weekly workshops or mini-projects will give you an immersive learning experience by applying what you learn as you go.

### Online Modules

Self-paced learning through online course modules within our platform allowing you the flexibility with the hours you choose to study within the week.

### Weekly Office Hours

Your mentor will help you every week to guide through any challenges and questions for every weekly module you complete through Live Weekly Office Hours. This would be the time to also learn from the rest of the group's Q&A's too.

### Mini-Projects

With every critical milestone you achieve throughout the Bootcamp, you will complete mini-projects that will test your ability to apply learnings in a practical way. These mini-projects will be reviewed and receive feedback during Office Hours.

### Mentoring & Discussions Forum

You'll have access to a dedicated bootcamp discussion forum to collaborate and seek help from industry experts and other students. This discussion forum can be found when you launch the course. The Bootcamp also includes access to real LIVE mentoring and discussion group sessions\* that happen twice a week. Here is a tentative schedule:

EVERY TUESDAY

Q&A SESSION  
6:00 – 8:00 CST

EVERY FRIDAY

Review Session  
6:00 – 8:00 CST

### Q&A Session

Bring all your questions you may have and get the answers you're looking for.

### Review Session

During this session, we will review the previous weeks work, what is expected the following week, and any other questions you may have that need answers.



## Zoom Sessions

In the introductory bootcamp email, you will be provided a specific link issued to the class for attending the weekly sessions. Using this link, you can connect to Zoom and interact with instructors. You can also use the following link to join by placing in your assigned Meeting ID. <https://www.zoom.us/join>

## Course Outline

The courseware contains various preliminary foundation lectures which first teach the basics of the subject at hand then later move on to moderate and advanced level courses. Apart from that, experiential learning is one of the phenomenon's followed by our bootcamp program which is ought to truly add value.

Study Plan	COURSES / PROJECTS
Week 1	Course 01: Introduction to Data Science
Week 2	Course 02 – Option A: Analyzing and Visualizing Data with Power BI
Week 2	Course 02 – Option B: Analyzing and Visualizing Data with Excel
Week 3	Course 03: Analytics Storytelling for Impact
Week 4	Course 04: Ethics and Law in Data and Analytics
Week 5 - 6	Course 05: Querying Data with Transact-SQL
Week 7	Course 06 – Option A: Introduction to R for Data Science
Week 8	Course 06 – Option B: Introduction to Python for Data Science
Week 9 - 10	Course 07 – Option A: Essential Math for Machine Learning: R Edition
Week 11 - 12	Course 07 – Option B: Essential Math for Machine Learning: Python
Week 13	Course 08 – Option A: Data Science Research Methods: R Edition
Week 14	Course 08 – Option B: Data Science Research Methods: Python Edition
Week 15 – 16	Course 09 – Option A: Principles of Machine Learning: R Edition
Week 17 – 18	Course 09 – Option B: Principles of Machine Learning: Python Edition
Week 19	Course 10: Developing Big Data Solutions with Azure Machine Learning
Week 20	Course 11: Analyzing Big Data with Microsoft R
Week 21	Course 12: Implementing Predictive Analytics with Spark in Azure
Week 22 - 26	Final Capstone Project

## Capstone Project

As the final part of this Bootcamp, you will direct all your learnings to a capstone Final Project that will demonstrate your skills and expertise across all the necessary tools and technologies to become a successful Data Scientist.

The assigned mentor will provide you the capstone project during the live sessions.



## Who is the Data Science Bootcamp for?

Are you someone who is passionate about solving real life problems that are data driven? Are you someone who believes the future of better decision-making lies in the right data? If yes – or if any of the following applies to you – this Bootcamp is the smart career move for you:

- You recently graduated from college and enjoyed math and statistics
- You have a college degree and currently considering career change but do not know where to start
- You want to learn how large organizations make data-driven real life social and business decisions
- You are comfortable with basic data tools like Excel and fundamentals of statistics
- You are looking for a career that provides tremendous freelancing opportunities and growth