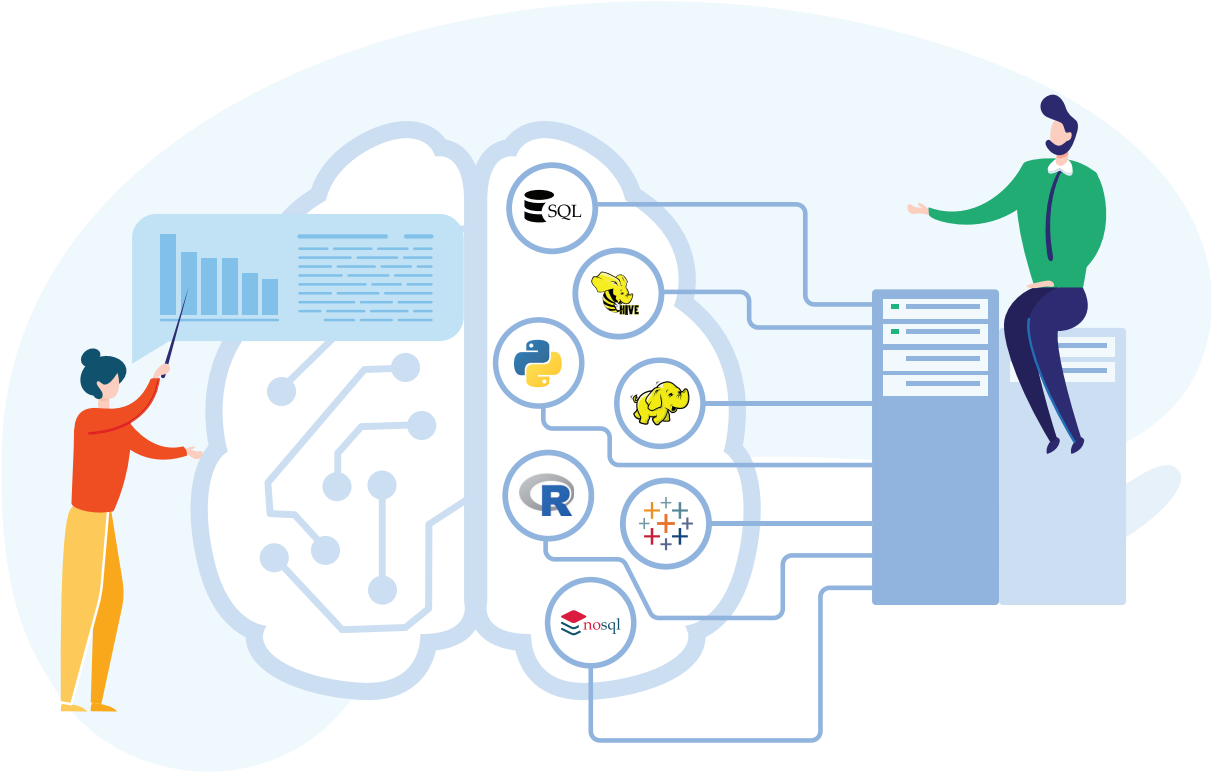


DATA SCIENCE BootCamp

Launch your career as a Data Scientist by working on real-world projects and data sets

knowledgehut

- 120 hours of Immersive Hands-on Instructor-led Training
- Learn by working on projects and data sets along with Mentors
- Master Python, Machine Learning Methods, Data Science and Big Data Tools
- Showcase abilities by building a portfolio with professional projects
- Career Mentoring Support provided
- Get help from dedicated Mentors on projects and assignments

120 hrs
live sessions

300+ hrs
quizzes, assignments

100+
data sets

14
industry use cases

Tools and Technologies learnt

What You Will Learn

Data Science Tools & Technologies

Get acquainted with various analysis and visualization tools such as Matplotlib and Seaborn.

Data Visualization using Python

Use of Python graphics libraries like Matplotlib, Seaborn etc.

Statistics for Data Science

Understand the behavior of data;build significant models using concepts of Statistics Fundamentals.

Advanced Statistics & Predictive Modeling

ANOVA, Linear Regression using OLS, Logistic Regression using MLE, KNN, Decision Trees

R for Data Science Foundation

Learn about the various libraries offered by R to manipulate data. Use of various R libraries like Dplyr, Data.table.

Data Science Using Python

Learn Data Science Concepts, Linear Regression, Logistic Regression, Dimensionality Reduction, Decision Trees and Time Series Forecasting.

Python for Data Science

Learn the various Python libraries to manipulate data, like Numpy, Pandas, Scikit-Learn, Statsmodel.

Machine Learning

Supervised Learning, Unsupervised Learning, Recommender Engines, Ensemble Machine Learning, Neural Networks

Exploratory Data Analysis

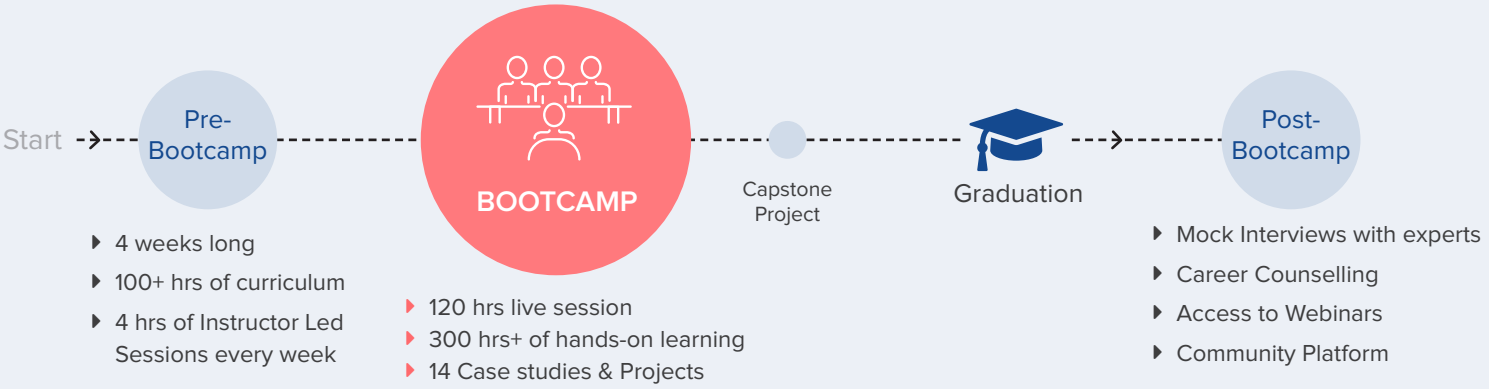
Use Python libraries and work on data manipulation, data preparation and data explorations.

Deep learning

Learn Deep learning and Natural Language Processing concepts.

HOW IT WORKS

The Data Science Bootcamps conducted are interactive in nature and fun to learn as a substantial amount of time is spent on hands-on practical training, use-case discussions, and quizzes.



Human Driven Learning

Real World Projects

Unlimited mentor support

Eligibility

This Data Science Bootcamp has been designed for people with prior experience in statistics and programming, such as Engineers, software and IT professionals, analysts, and finance professionals.

Pre-requisites

- Coding experience with a general-purpose programming language (e.g., Python, R, Java, C++) is preferred.
- Comfortable with basic mathematics and statistics - probability and descriptive statistics, including concepts like mean and median, standard deviation, distributions, and histograms.

Note: If you don't meet the above-mentioned criteria, you can attend a pre-boot camp workshop, which will help you meet the requirements.

Knowledgehut Experience

Live and Interactive

Interact with instructors in real-time— listen, learn, question and apply. Share opinions and improve your coding skills with assistance from the instructors.

Learn through Doing

Learn theory backed by practical case studies, exercises, and coding practice. Get skills and knowledge that can be effectively applied.

Curriculum Designed by Experts

Our courseware is always current and updated with the latest tech advancements. Stay globally relevant and empower yourself with the training.

Advance from the Basics

Learn concepts from scratch, and advance your learning through step-by-step guidance on tools and techniques.

Code reviews by professionals

Get reviews and feedback on all projects and case studies from professional Data Scientists and Architects.

Dedicated Mentor Support

Process of learning will be simplified with a 1-on-1 mentoring support. Work alongside an experienced practitioner on projects and assignments.

Career Services

The Data Science Bootcamps conducted are interactive in nature and fun to learn as a substantial amount of time is spent on hands-on. Knowledgehut trainers are remarkably qualified industry experts having several years of relevant industry experience.

Career Counselling
Personal Assistance

Resume / CV / Portfolio
Linkedin, Github and Kaggle profiles

Help With Interviews
Mock interviews and Post Interview Reviews

Curriculum

Module 1 Intro to Data Science

- What is Data Science?
- Analytics Landscape
- Life Cycle of a Data Science Projects
- Data Science Tools & Technologies

Module 2 Probability & Statistics

- Measures of Central Tendency
- Measures of Dispersion
- Descriptive Statistics
- Probability Basics
- Marginal Probability
- Bayes Theorem
- Probability Distributions
- Hypothesis Testing

Module 3 Basics of Python for Data Science

- Python Basics
- Data Structures in Python
- Control & Loop Statements in Python
- Functions & Classes in Python
- “Working with Data”
- Analyze Data using Pandas
- Data Visualization in Python

Module 4 Basics of R for Data Science

- Intro to R Programming
- “Data Structures in R Control & Loop Statements in R”
- “Functions and Loop Functions in R”
- “String Manipulation & Regular Expression in R”
- “Working with Data in R”
- Handling missing values in R
- Data Visualization in R

Module 5 Exploratory Data Analysis

- Data Transformation & Quality Analysis
- Exploratory Data Analysis

Module 6 Linear Regression

- ANOVA
- Linear Regression (OLS)
- Case Study: Linear Regression

Module 7 Logistic Regression

- Logistic Regression
- Case Study: Logistic Regression

Module 8 Dimensionality Reduction

- Principal Component Analysis (PCA)
- Factor Analysis
- Case Study: PCA/FA

Module 9 Decision Trees

- Introduction to Decision Trees
- Entropy & Information Gain
- Standard Deviation Reduction (SDR)
- Overfitting Problem
- Cross Validation for Overfitting Problem
- Running as a solution for Overfitting
- Case Study: Decision Tree

Module 10 Time Series Forecasting

- Understand Time Series Data
- Visualizing TIme Series Components
- Exponential Smoothing
- Holt’s Model
- Holt-Winter’s Model
- ARIMA
- Case Study: Time Series Modeling on Stock Price

Module 11 Introduction to Machine Learning

- Machine Learning Modelling Flow
- How to treat Data in ML
- Parametric & Non-parametric ML Algorithm
- Types of Machine Learning
- Performance Measures
- Bias-Variance Trade-Off
- Overfitting & Underfitting
- Optimization

Module 12 Supervised Learning

- Linear Regression (SGD)
- Logistic Regression (SGD)
- Neural Network (ANN)
- Support Vector Machines

Module 13 Unsupervised Learning

- K-Means Clustering
- Hierarchical Clustering

Module 14 Recommender Engines

- Association Rules
- User-Based Collaborative Filtering
- Item-Based Collaborative Filtering
- Case Study: Build a Recommender Engine

Module 15 Ensemble Machine Learning

- Ensemble Technqiues
- Bootstrap Sampling
- Bootstrap Aggregation (Bagging)
- Supervised Learning - Random Forest
- Boosting
- Supervised Learning - AdaBoost Algorithm
- Supervised Learning - Gradient Boosting Machine
- Case Study: Heterogeneous Ensemble Machine Learning

Module 16 Neural Networks

- The Biological Inspiration
- Multi-Layer Perceptrons
- Activation Functions
- Back propagation Learning
- Case Study: Multi-Class classification

Module 17 Deep Learning

- Convolutional Neural Networks (CNN)
- Introducing Tensorflow
- Neural Networks using Tensorflow
- Introducing Keras
- Case Study: Neural Networks using Tensorflow
- Case Study: Neural networks using Keras
- Introducing H2O
- Case Study: Neural networks using H2O
- Recurrent Neural Networks (RNN)
- Long Short Term Memory (LSTM)
- Case Study: LSTM RNN with Keras

Module 18 Natural Language Processing (NLP)

- Natural Language Processing (NLP)
- Case Study: Case Study using NLP

Module 19 Capstone Project

- Industry relevant capstone project under experienced industry-expert mentor

Module 20 Interview Preparation

- Mock Interview - 2 sessions

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