12-Week, Full-Time Data Science Bootcamp

Develop expertise in R, Python, Hadoop and Spark in just 12 weeks, while enjoying our support as we help lift your career

Overview

In this program students will learn beginner and intermediate levels of Data Science with R, Python & Hadoop as well as the most popular and useful packages like dplyr, scikit-learn, and more. Once the foundation of learning has been set, students work on projects throughout the bootcamp. Along the way, students will have assistance in preparing for the job search through resume review and interview preparation.

Course Structure & Syllabus

Pre-Work
Tailored study plans are developed for each student as part of the preparation for joining the bootcamp. Students with limited coding experience are encouraged to take our weekend courses in R and Python, which are offered to them for free.

Week 1 | Data Science Toolkit
Learn to work from the command line - a must have skill for all data scientists. Work with basic Linux commands, Vim for text editing, and Git for version control. MySQL is taught with extensive practice on data manipulation.

Week 1 - 2 | Data Analytics & Visualization with R
Dive deep into R programming language from basic syntax to advanced packages and data visualization (e.g. reshape2, dplyr, string manipulation, web scraping, API, ggplot2, R Shiny). Create a data-centric website with interactive visualizations and carry out a mini data analysis project.

Week 3 - 4 | Machine Learning with R - Part I
Descriptive statistics, hypothesis testing, missingness, imputation & KNN, simple linear regression, multiple linear regression, generalized linear models, time series analysis, principle components analysis, Ridge/Lasso regression.

Week 5 - 6 | Data Analytics & Visualization with Python
Basic Python programming is followed by advanced algorithms. Learn versatile packages such as matplotlib, pandas, and beautifulsoup and complete a Python web scraping project.

Week 7 - 8 | Machine Learning with R - Part II
Classification, cluster analysis, trees, random forests, bagging, boosting, natural language processing. Complete a Kaggle competition and present results in Meetup.

Week 9 | Machine Learning with Python
Deepen machine learning skills with scikit learn. Focus on data cleaning, feature extraction, modeling, and model selection using regression, SVM, PCA, tree models, clustering and more.

Week 10 | High Performance Computing, Hadoop, & Spark
Learn the concepts of high performance computing with parallel computing skills in Python and R. Use a distributed system to study MapReduce, Hadoop, and Hive, and carry out data analysis with Spark.

Week 11 - 12 | Capstone Project & Job Placement Support
Complete an industry-related capstone project. Resume review, tips of jobs interview skills, and opportunities to interview with potential employers.

Project 1: Exploratory Data Visualization with R
Project 2: R Shiny Interactive Application
Project 3: Python Web Scraping
Project 4: Machine Learning
Project 5: Capstone Project