

Data Science Essentials

**INSTRUCTOR-LED | 8-10 WEEKS | 60 HOURS |
ONSITE OR REMOTE**

OVERVIEW

Analysts have the opportunity to derive insights and build predictive models for business needs ranging from customer segmentation to personalized product recommendations. In this training, participants build on Level 1 Data Skills to practice advanced analytics and explore machine learning in Python.

OUTCOMES

- **Level 1 Data Skills:** Wrangle, explore, model, and communicate the results of multiple analyses with Python and its many packages
- **Level 2 Data Skills:** Work on advanced analytics data sets and explore the capabilities of machine learning

IDEAL FOR

- Analysts or engineers who want to break into data science
- Managers who need to work with technical teams and want to more effectively communicate and empathize with them

PRE-WORK

Learners are assigned up to 12 hrs of Data Science Fundamentals online pre-work to prepare for class.

AGENDA

12 Hrs

Programming Basics

Practice Python programming basics, work in a development environment using git and GitHub.

Project: Work through common Python code challenges

15 Hrs

Research Design and Exploratory Data Analysis

Practice exploratory data analysis for cleaning and aggregating data and understanding the basic statistical testing values of your data.

Project: Explore and analyze order data from Chipotle

15 Hrs

Foundations of Data Modeling

Create linear and logistic regression models, and branch from statistics into machine learning with kNN and classification.

Project: Guided practice building a linear regression and kNN model.

18 Hrs

Machine Learning

Learn and practice core machine learning models (decision trees, random forests, NLP, time series) to evaluate complex problems.

Capstone Project: Develop a problem statement, collect relevant data, conduct EDA, and develop a model that you'll explain in a presentation.

