

In Week 5, we explore statistical learning through a series of videos and comprehension checks followed by a two-part case study that allows you to practice your coding skills with homeworks. We will use the scikit-learn library, one of the most widely used Python libraries for machine learning.

In Week 5, you will:

- Learn the basics of linear and logistic regression
- Learn how to use scikit-learn to fit linear and logistic regression models
- Learn the basics of random forest methods for regression and classification
- Learn how to use scikit-learn to fit a random forest model
- Apply the techniques learned to analyze a dataset of movies

Week 5 is divided into three parts followed by the case study. Part 1 covers linear regression, Part 2 covers logistic regression, and Part 3 covers random forest methods for regression and classification. Comprehension Checks follow each video. The week concludes with a two-part case study looking at a movie dataset with two Homeworks that will allow you to practice the coding techniques introduced in the videos.

The Homeworks and some of the Comprehension Checks will require you to work through code. We encourage you to use Python to interactively test out your answers and further your learning.