Web scraping is a term used to describe the use of a program or algorithm to extract and process large amounts of data from the web. Whether you are a data scientist, engineer, or anybody who analyzes large amounts of datasets, the ability to scrape data from the web is a useful skill to have. Let's say you find data from the web, and there is no direct way to download it, web scraping using Python is a skill you can use to extract the data into a useful form that can be imported.

In this tutorial, you will learn about the following:

• Data extraction from the web using Python's Beautiful Soup module

• Data manipulation and cleaning using Python's Pandas library

• Data visualization using Python's Matplotlib library

The dataset used in this tutorial was taken from a 10K race that took place in Hillsboro, OR on June 2017. Specifically, you will analyze the performance of the 10K runners and answer questions such as:

• What was the average finish time for the runners?

• Did the runners' finish times follow a normal distribution?

• Were there any performance differences between males and females of various age groups?