# Visualizing and Manipulating Data in Python

## ANI\_105d | On-Demand | Automation and Insights | Express Course Duration: 1 hour

This self-paced eLearning course is a light-hearted introduction to data manipulation and visualization in Python. Students will manipulate data sets and create data visualization using Python libraries.

#### **Intended Audience**

Those with some programming experience who are interested in data manipulation and visualization in Python.

#### **Objectives**

After completing this course, the learner will be able to:

- Describe how to extract data from the CSV format
- Use the matplotlib module to visually represent data
- Use the Python Pandas to manipulate data
- Explain how to use Pandas clean data to eliminate outliers
- Explain how to access APIs
- Describe how to extract data from the JSON format
- Describe commonly used file formats in data science

#### **Course Prerequisites**

No Prerequisites

### Outline

- 1. Introduction
- 2. Extracting and Visualizing Data
- 2.1 Extracting and Visualizing Data
- 2.2 Code Challenge
- 3. Data Manipulation
- 3.1 Pandas Overview
- 3.2 Data Manipulation
- 3.3 Code Challenge
- 4. Data Analysis
- 4.1 Data Analysis
- 4.2 Code Challenge
- 5. Working with APIs
- 6. Data Visualization
- 6.1 Visualizing Data from JSON

**Final Assessment** 



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