Skillsoft-Data Visualization with Python

Overview:
Students will develop a powerful toolkit to visualize data
with static graphs and begin exploring interactive charts. This course will help students become expert data communicators to make their analyses shine. By the end of the course, attendees will be able to manipulate and summarize a variety of file formats and build intuitive data visualizations with Python.

Prerequisites:
Attendees must be comfortable using Python to manipulate data and perform basic operations, including data wrangling and must have the correct libraries of cufflinks and plotly installed. (instructions included)

Objectives:

- Discuss the concepts and use cases of data visualization
- Build static data visualizations in Python
- Build basic interactive data visualizations in Python
- Select the appropriate data visualization for each scenario

Topics covered

Day One

- Introduction to the course
- Introduce, load and clean dataset
- Reshape data using pandas
- Define use cases of Exploratory Data Analysis (EDA)

Day two

- Visualizing data with matplotlib
- Create histograms, boxplots, and bar charts
- Create scatterplots
- Customize graphs
- Create violin plots
- Create compound visualizations in grid format

Day Three

- Create layered plots
- Save your plots and your data

- Best practices of data visualization

Day Four

- Describe uses and strengths of plotly and cufflinks packages
- Transform dataset for visualizations
- Create basic interactive visualizations using cufflinks
- Visualize multiple metrics using cufflinks
- Create interactive visualizations using plotly
- Generate interactive visualizations with transformed summary data

Software and package requirements

- Python and Anaconda
- Packages:
    - **import pandas as pd**
    - **import numpy as np**
    - **import pickle**
    - **import os**
    - **import matplotlib.pyplot as plt**
    - **pip install cufflinks==0.16.0**
    - **pip install plotly==3.10.0**