CLARUSWAY

Lesson Plan

DATA VISUALIZATION w/PYTHON

The aim of this course is to gain data visualization capabilities using Python libraries such as Matplotlib and Seaborn. This course efficiently teaches students data visualization techniques such as statistical graphs, plots and information graphics.

Custodian :	Michael GD-Instructor (michael_g@clarusway.com)
In-class Sessions :	6 Sessions / 18 hours
Lab Sessions :	2 Labs / 2 hours

Certification Requirements:

1. % 70 attendance to in-class lessons (at least 4/6 for DVwPy Course)
2. Successfully complete and submit assignments & projects (at least 1 assignment & 1 project for DVwPy Course)

Prerequisites

- Statistics Fundamentals
- Python Experience
- Numpy and Pandas Experience

Course Outline

1. Data Visualization with Matplotlib
   1.1. Introduction to Matplotlib
   1.2. Matplotlib Part 1 (axes, figure, labels, title, colors and style)
   1.3. Matplotlib Part 2 (subplots, plot type, figsize, legend)
   1.4. Matplotlib Exercises Overview
   1.5. Matplotlib Exercises Solutions

2. Data Visualization with Seaborn

    - 2.1. Introduction to Seaborn
    - 2.2. Distribution Plots
    - 2.3. Categorical Plots
    - 2.4. Matrix Plots
    - 2.5. Grids
    - 2.6. Regression Plots
    - 2.7. Style and Color
    - 2.8. Seaborn Exercise Overview
    - 2.9. Seaborn Exercise Solutions

3. Data Visualization Capstone Project
    - 3.1. Project Overview
    - 3.2. Project Solutions

Materials & Resources

- Clarusway Learning Management System (LMS)
- Matplotlib Documentation
- Seaborn Documentation

Tools and Software

- Zoom, Slack, Kahoot, Peardeck Applications
- Jupyter Notebook / Google Colab
- Numpy, Pandas, Matplotlib, Seaborn

Assignments & Projects

Assignments

1. Assignment-1 (Data USKilling)
2. Assignment-2 (Data USKilling)

Projects

1. Data Visualization project (Data BikeShare).