Data Analytics Week 4

Week 4:  
  
Tasks & Resources:-

“Welcome to the Week 4 of PrepInsta’s Data Analytics Internship program.

In this module you will be working on data cleaning and manipulation using Pandas and NumPy. You will find the task and resources both on this page.”

**Project4: - World Bank Data**

**Objective:**

Explore the realm of data visualization in Python by utilizing powerful libraries such as Matplotlib, Seaborn, and Plotly. The task is to create visually engaging and informative plots, graphs, and charts based on a provided dataset.

**Steps to Perform:**

* **Dataset Familiarization:**

Obtain the dataset provided for this task and examine the dataset to understand its structure, variables, and potential insights it may offer.

* **Library Setup:**

Ensure you have the necessary Python libraries installed, including Matplotlib, Seaborn, and Plotly.

Set up your Python environment or Jupyter Notebook for data visualization.

* **Selecting Visualization Goals:**

Define the goals of your data visualization. What insights or patterns do you aim to convey to the audience?

Consider the types of plots and charts that would best represent the information in your dataset.

* **Matplotlib Basics:**

Start with Matplotlib to create fundamental visualizations like line plots, bar charts, and scatter plots.

Experiment with customization options, such as color schemes, labels, and titles.

* **Seaborn Styling:**

Explore Seaborn to enhance the aesthetics of your visualizations.

Utilize Seaborn’s functionalities for statistical data visualization to uncover deeper insights.

* **Interactive Plots with Plotly:**

Dive into Plotly to create interactive plots and dashboards.

Experiment with features like hover effects, zooming, and panning to enhance user engagement.

* **Combining Visualisations:**

Integrate multiple visualizations into a cohesive narrative. For example, combining a line plot with a bar chart to tell a more comprehensive story.

* **Documentation and Interpretation:**

Document your code and the rationale behind each visualization choice.

Interpret the patterns and insights derived from your visualizations. What story does the data tell?

**Pre-requisites**

* Basic knowledge of Python programming.
* Familiarity with Jupyter Notebook or any Python IDE.
* Installation of matplotlib, Seaborn, and Plotly libraries.

Note:-In case you want to revise the pre-reqs, just head over to the resources section for a quick brush up.

**What you need to do?**

**Good Practices:**

* Pay attention to color choices and make sure they are accessible and distinguishable.
* Experiment with different chart types to find the most effective representation for your data.
* Seek inspiration from real-world examples or design principles to enhance the visual appeal of your plots.
* Consider the audience and tailor your visualizations to effectively communicate with them.

This task not only evaluates your technical skills in data visualization but also challenges you to think critically about how to convey information effectively through visuals.

Visualization is a powerful tool in data analytics, and this task aims to sharpen your ability to present insights in a compelling and informative manner.

Happy visualizing!