Task 2: Exploratory Data Analysis (EDA)

- **Objective: Understand data using statistics and visualizations.**
- **Tools: Pandas, Matplotlib, Seaborn, Plotly**

Hints/Mini Guide:

1. Generate summary statistics (mean, median, std, etc.).
2. Create histograms and boxplots for numeric features.
3. Use pairplot/correlation matrix for feature relationships.
4. Identify patterns, trends, or anomalies in the data.
5. Make basic feature-level inferences from visuals.

Dataset: You can use any dataset relevant to the task, e.g., Titanic Dataset
link to download: click here to download dataset

What You'll Learn:Data visualization, descriptive statistics, pattern recognition.

Interview Questions:

1. What is the purpose of EDA?
2. How do boxplots help in understanding a dataset?
3. What is correlation and why is it useful?
4. How do you detect skewness in data?
5. What is multicollinearity?
6. What tools do you use for EDA?
7. Can you explain a time when EDA helped you find a problem?
8. What is the role of visualization in ML?

📤 **Submit Here:**
After completing the task, paste your GitHub repo link and submit it using the link below:

- 👉 [Submission Link]

📌 **Task Submission Guidelines**

- ⏰ **Time Window:**

You can complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10 :00 PM

- 🔍 **Self-Research Allowed:**

You are free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

- 🛠️ **Debug Yourself:**

Try to resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

- 💸 **No Paid Tools:**

If the task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

- 📁 **GitHub Submission:**

Create a new GitHub repository for each task.
Add everything you used for the task — code, datasets, screenshots (if any), and a **short README.md** explaining what you did.

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