

Academic Task Number: 01

Course code: CAB203

Date of allotment: 17-Feb-2025

Course Title: Data Visualization

Date of submission: 17-Feb-2025

Maximum Marks: 30 Practical + 20 Viva = 50 Marks

CRM Sales Opportunities

B2B sales pipeline data from a fictitious company that sells computer hardware, including information on accounts, products, sales teams, and sales opportunities.

Steps to Follow:

1. **Load & Clean the Data:** Handle missing values, correct data types, and ensure consistency.
2. **Merge Datasets:** Integrate **accounts, products, sales teams, and sales pipeline** to form a unified dataset.
3. **Data Analysis & Insights:** Identify trends, sales performance, and key business metrics.
4. **Visualization:** Use **Matplotlib** to create **bar charts, line plots, scatter plots, pie charts, and histograms** for in-depth analysis.

Dataset link - https://drive.google.com/drive/folders/17VaTxrZfyNvDPpEb3_T_442G4FsHqves?usp=drive_link

Questions:

1. **Sales Trends Over Time**
 - **Question:** How have sales opportunities changed over time?
 - **Visualization:** Line chart showing sales opportunities by month/year.
2. **Top Performing Sales Representatives**
 - **Question:** Who are the top-performing sales representatives?
 - **Visualization:** Bar chart showing total sales by each sales representative.
3. **Sales by Region**
 - **Question:** Which regions have the highest sales opportunities?
 - **Visualization:** Bar chart or map showing sales opportunities by region.
4. **Sales Conversion Rate**
 - **Question:** What is the conversion rate of sales opportunities?
 - **Visualization:** Pie chart showing the percentage of converted vs. non-converted opportunities.
5. **Product Performance**
 - **Question:** Which products have the highest sales?
 - **Visualization:** Bar chart showing sales by product.