project Title: Bank dataset

Overview

This project involves analyzing a digital marketing dataset that includes customer demographics and campaign performance metrics. The main goal is to explore customer behavior, understand ad performance, and identify factors that lead to conversion. This project helps in building a foundation for predictive modeling such as conversion prediction or ROI estimation.

Technologies Used

Python

Pandas

NumPy

Matplotlib / Seaborn

Jupyter Notebook

CSV (Excel-compatible)

Scikit-learn (for optional ML modeling)

Git & GitHub (for version control)

Excel (for preliminary data checks)

Steps Performed

1. Data CollectionCreated/simulated a dataset with fields like name, age, gender, source, clicks, revenue, etc.

2. Data Cleaning

Handled missing or duplicate entries

Validated email and age values

3. Exploratory Data Analysis (EDA)

Distribution of age, gender, country, and sources

Click-through rate (CTR) = clicks / impressions

Conversion rate = conversion / impressions

ROI = revenue / spend

4. Visualization

Bar charts for sources vs. conversion

Pie charts for gender distribution

Heatmaps for correlation

5. Optional Machine Learning

Built a simple classification model (Logistic Regression) to predict conversion

6. Conclusion

Key insights on which platform performed best

Recommended strategies to improve conversion

Output

Cleaned and transformed dataset

Graphs and plots showing insights

CSV file ready for further modeling or reporting

Accuracy metrics (if ML was applied)

Files Included

Bank \_prediction.ipynb-Jupyter Notebook

Bank\_data.csv -dataset file

Readme.docx-project summary

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