Project Title: Data Handling and Analysis using Python (AI/ML Foundation Project)

Project Description:
This project focuses on building a solid foundation for Artificial Intelligence and Machine Learning development through data handling and analysis using Python. The goal is to understand how to collect, clean, manipulate, and visualize data efficiently using essential Python libraries such as NumPy, Pandas, and Matplotlib. The project demonstrates how raw data can be transformed into meaningful insights — a crucial first step in any AI/ML pipeline.

Objectives:
• To understand data structures and array manipulation using NumPy.
• To learn data cleaning, transformation, and analysis using Pandas.
• To visualize insights and patterns from datasets using Matplotlib and Seaborn.
• To prepare datasets for machine learning models.

Key Learning Outcomes:
• Gain practical experience in data preprocessing and visualization.
• Develop understanding of data-driven decision-making.
• Build a reusable foundation for future AI/ML model development.

Technologies and Tools Used:

Category	Tools / Libraries
Programming Language	Python
Core Libraries	NumPy, Pandas
Visualization	Matplotlib, Seaborn
IDE / Environment	Jupyter Notebook / VS Code / Google Colab
Version Control	Git, GitHub
Dataset Format	CSV / Excel

Team Members:
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Course: BCA
Submitted To: (To be added)
Submission Date: (To be added)

Future Scope:
• Extend this data analysis into predictive ML models.
• Integrate with AI tools (e.g., Scikit-learn, TensorFlow).
• Automate reporting dashboards using Streamlit.