pandas

numpy

matplotlib

seaborn

scikit-learn

# Unsupervised Clustering Solution

This project performs KMeans clustering on a customer segmentation dataset (`MallCustomers.csv`) to identify meaningful customer groups based on their income and spending habits.

## Folder Structure

unsupervised\_clustering/

│

├ data/ # Raw or sample datasets

├notebooks/ # Original Jupyter notebooks

├src/ # Source code

│ ├\_\_init\_\_.py

│ ├data\_loader.py

│ ├ preprocessing.py

│ ├ clustering.py

│ ├visualization.py

│ └── utils.py

├ tests/ # Unit tests

│ └── test\_clustering.py

├── logs/ # Logging output

├── .gitignore

├── requirements.txt

├── README.md

└── main.py # Script to run the pipeline