



SUPERMARKET SALES ANALYSIS REPORT 2025

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Importing Required Libraries

In Python, importing required libraries means bringing in external tools (modules or packages) that provide additional functionalities to your program. Instead of writing complex code from scratch, you can use these libraries to handle data efficiently.

Explanation of Libraries:

- pandas: For loading, cleaning, and analyzing tabular data.
- numpy: For numerical operations.
- matplotlib & seaborn: For creating detailed visualizations.





Loading the Dataset

Loading the dataset refers to the process of importing a data file into your Python environment so that you can analyze, clean, and manipulate it.





Exploring the Data

examining the dataset to understand its structure, quality, and key characteristics before performing analysis

1. Check the structure of the dataset
2. Preview the first few rows
3. Summary statistics
4. Check unique values in categorical columns
5. Check correlations between numerical columns





Data Cleaning

is the process of identifying and correcting errors in a dataset to improve its quality and reliability.

1. Fix Data Types
2. Data Type Conversion
3. Handling Missing Values





Data Visualization

- Sales Analysis : What is the best-selling product line?
- Branch Analysis : Which branch generates the highest profit margin?
- Customer Analysis : What type of customers purchase the most?
- Time Analysis : Which days have the highest sales?
- Payment Analysis : What is the most commonly used payment method?
- Cities Analysis : Which cities have the highest sales?



