This guide provides a quick walkthrough to get the project running and view the key outputs.

**Step 1: Get the Code** Download the project folder from the Google Drive link. The main project file is market\_trend\_analysis\_amazon.py or market\_trend\_analysis\_amazon.ipynb.

**Step 2: Install Dependencies** Ensure you have Python installed. The project relies on several libraries. The most convenient way to install them is via pip from your terminal:

pip install pandas matplotlib prophet scikit-learn seaborn kagglehub

*Note: This command installs all necessary packages. The kagglehub library will handle downloading the dataset for you.*

**Step 3: Run the Analysis** You can run the analysis and generate the visualizations in one of two ways:

* **Using a Python interpreter:** Run the market\_trend\_analysis\_amazon.py file from your terminal. This will execute the entire script.

python market\_trend\_analysis\_amazon.py

* **Using Jupyter Notebook/Lab:** Open the market\_trend\_analysis\_amazon.ipynb file in a Jupyter environment. You can then run each code cell sequentially to see the data processing, analysis, and plot generation in real-time.

**Step 4: View the Key Outputs** After running the script, a series of plots will be generated and displayed. Here's what they show:

* **Daily Sales Trend:** A line graph showing the overall sales trend from 2019 to 2022, highlighting the upward trajectory.
* **Total Sales by Product Category:** Bar charts showing which product categories, such as 'Men Shoes' and 'Men Clothes,' have the highest sales and average reviews.
* **Price vs. Number of Reviews:** Scatter plots showing the weak correlation between a product's price and the number of reviews it receives.
* **Weekly Sales Forecast:** A plot generated by the Prophet model that forecasts future sales and visualizes the strong yearly seasonality.

For a detailed explanation of the findings and methodology, please refer to the **Project Report.pdf** file located in the Presentation & Report subfolder.