Key KPIs:

1. Total Revenue: Sum of the Amount or Total_Amount column.
2. Total Transactions: Count of unique Transaction_ID.
3. Average Transaction Value: Total_Amount / Total_Purchases or Total_Amount / count of Transaction_ID.
4. Average Customer Age: Average of the Age column.
5. Customer Retention Rate: Percentage of returning customers (those with multiple Transaction_ID entries) relative to all customers.
6. Product Popularity: Count of purchases by Product_Category or Product_Brand to find the most popular items.
7. Order Fulfillment Rate: Percentage of Order_Status marked as "Completed" relative to total orders.
8. Customer Satisfaction: Average of Ratings column or analysis of the Feedback column if it's qualitative.
9. Revenue by Customer Segment: Sum of Amount for each Customer_Segment.

GitHub Link:

https://github.com/kumkumbaswal003/Cloudthat_Project.git

AZURE DATA PIPELINE

For TechRetail

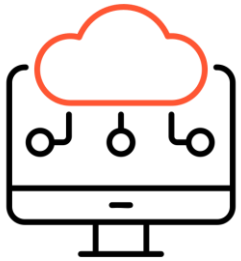
Group 4:

- Arnab Saha
- Debadrita Acharjee
- Kumkum Baswal

Background:

- **TechRetail**, a mid-sized retail company, wants to create a data pipeline to ingest retail data from various sources, process it using advanced analytics, and visualize the results in a dashboard. The goal is to gain insights into sales trends and improve decision-making. The company wants to leverage Azure Databricks for data processing and Microsoft Fabric for data integration and visualization.

Objectives:



Data Ingestion

- Azure Data Factory (ADF)
- ADLS Gen2

Data Processing

- Synapse Data Engineering
- Databricks

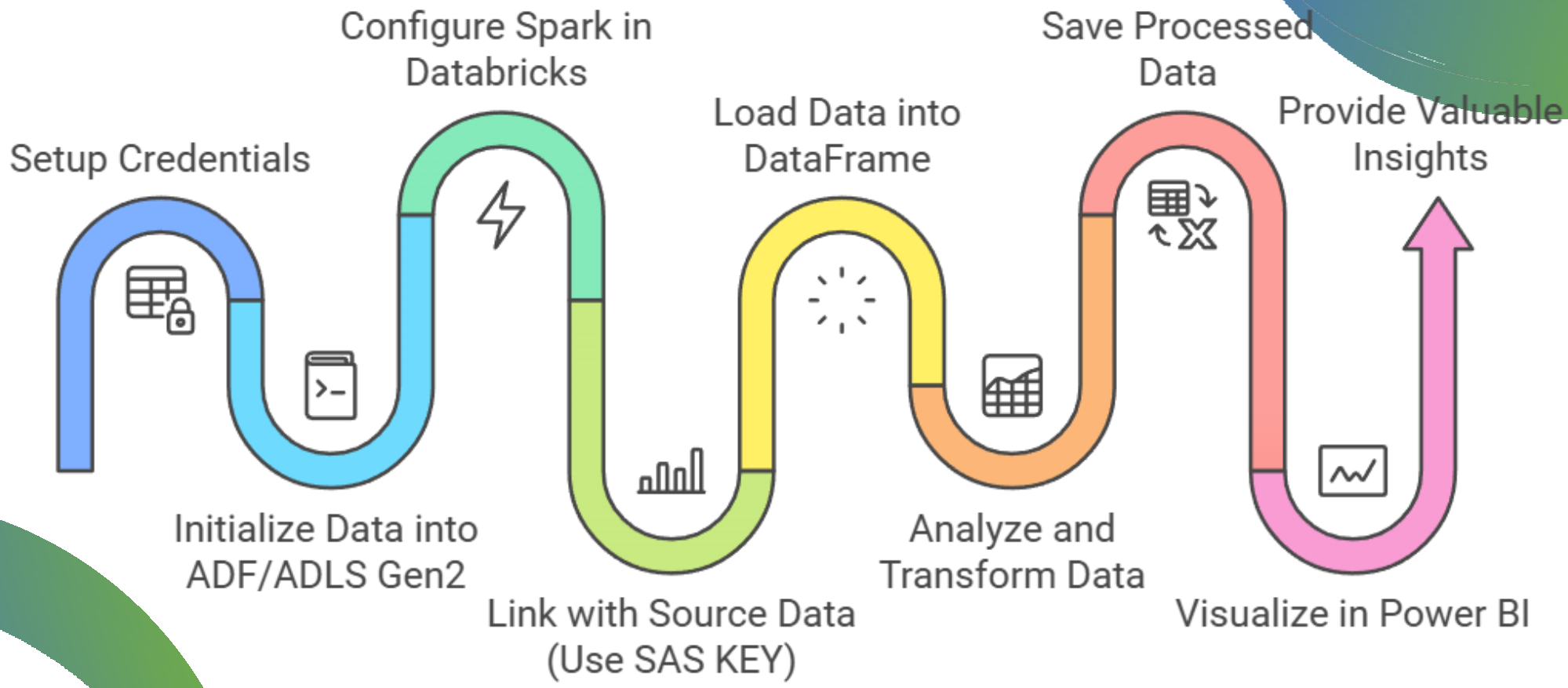
Data Storage

- ADLS Delta Table

Data Visualization

- Microsoft PowerBI

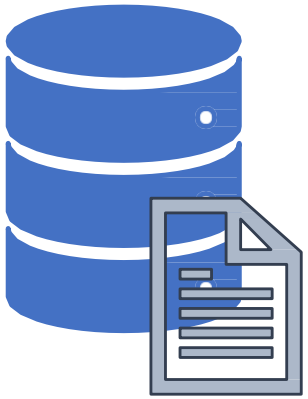
Architectural Process Flow:

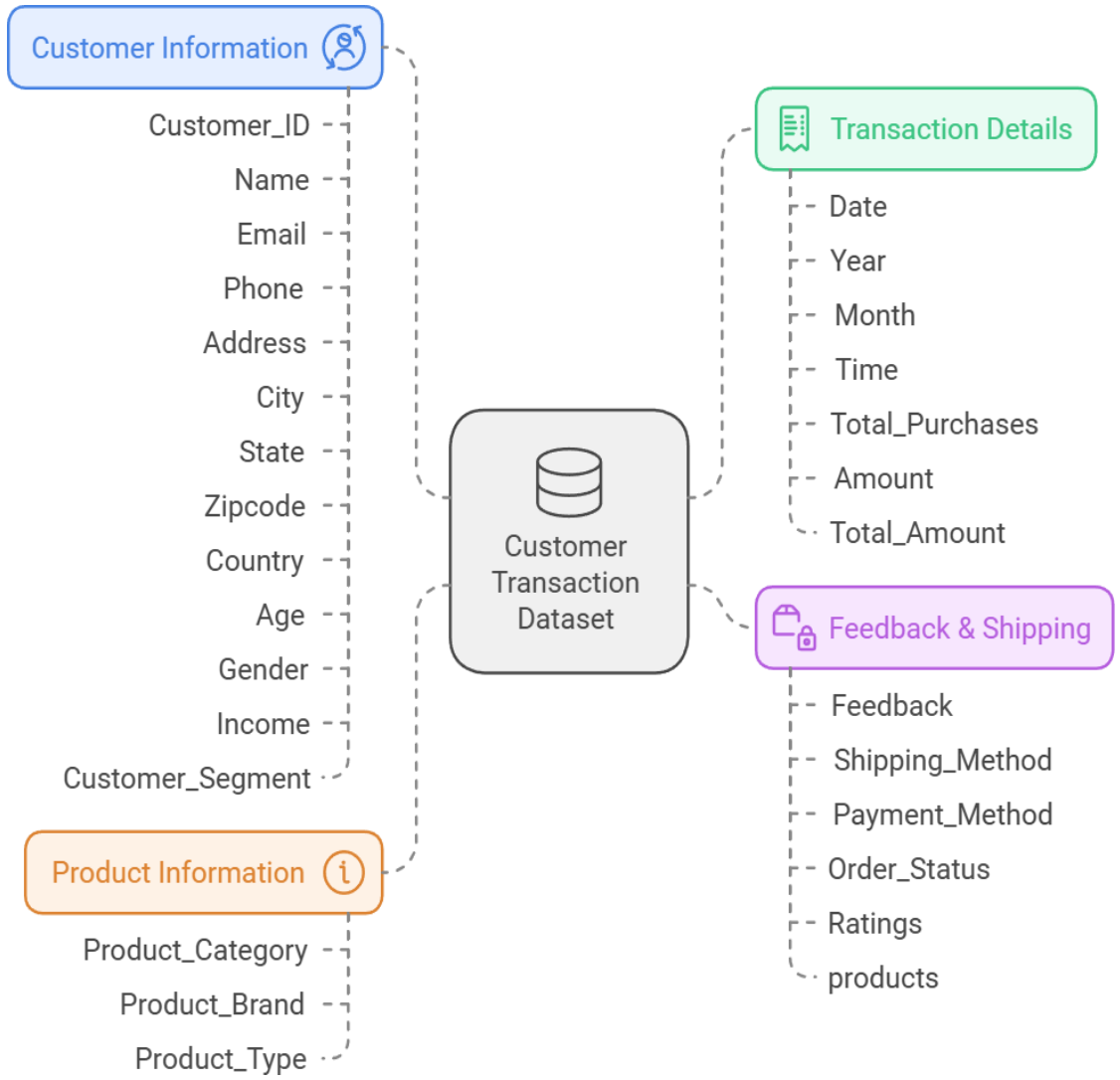


KNOW YOUR DATA

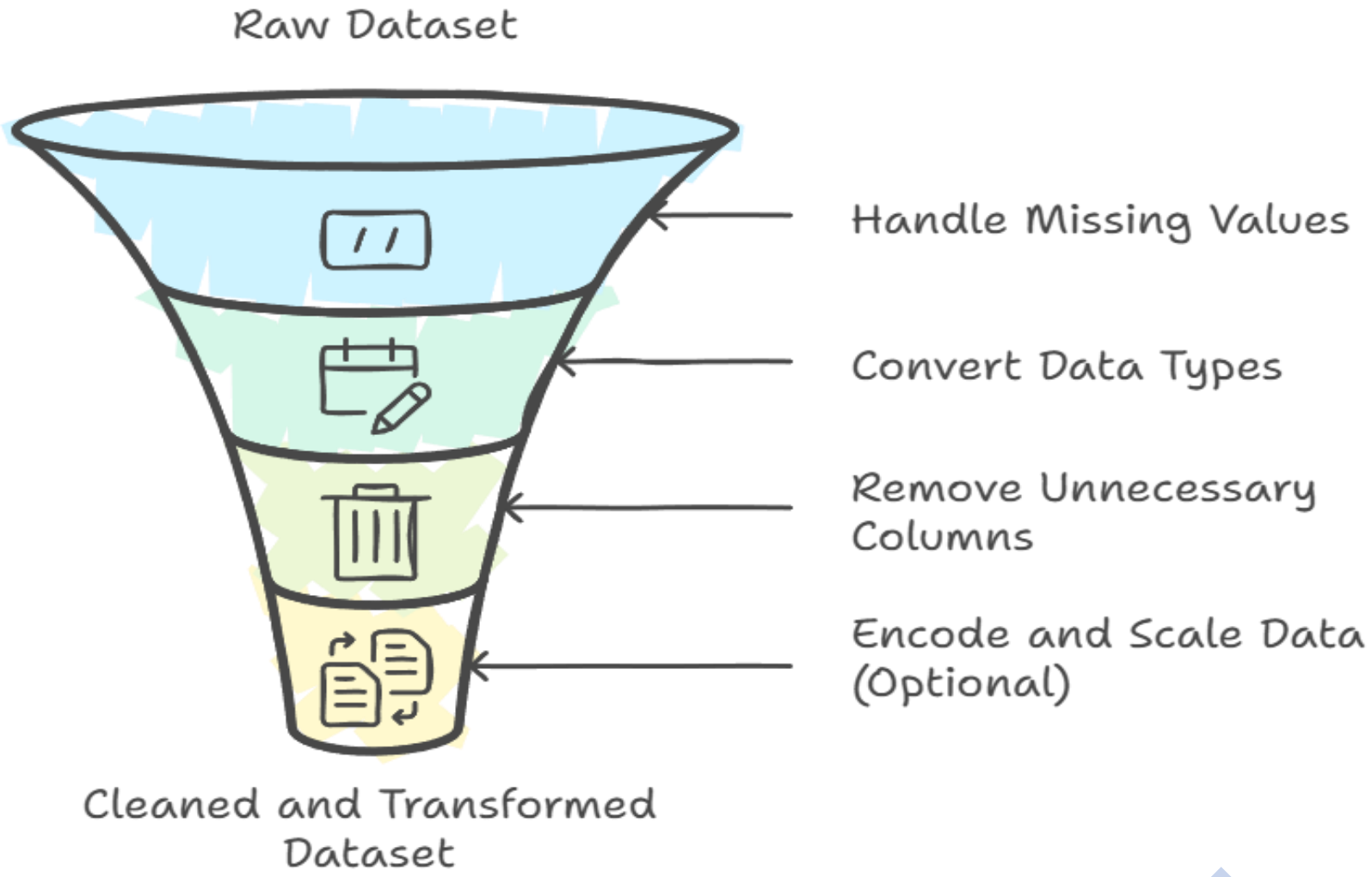
Dataset Insights

DATASET OVERVIEW

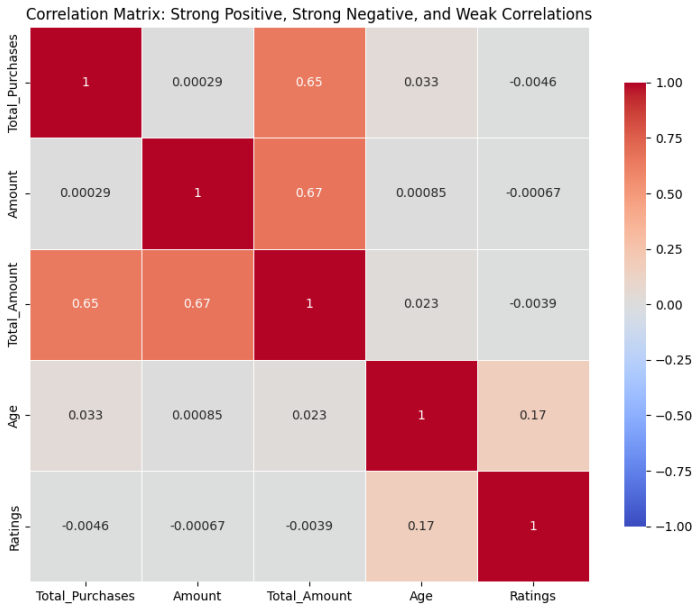


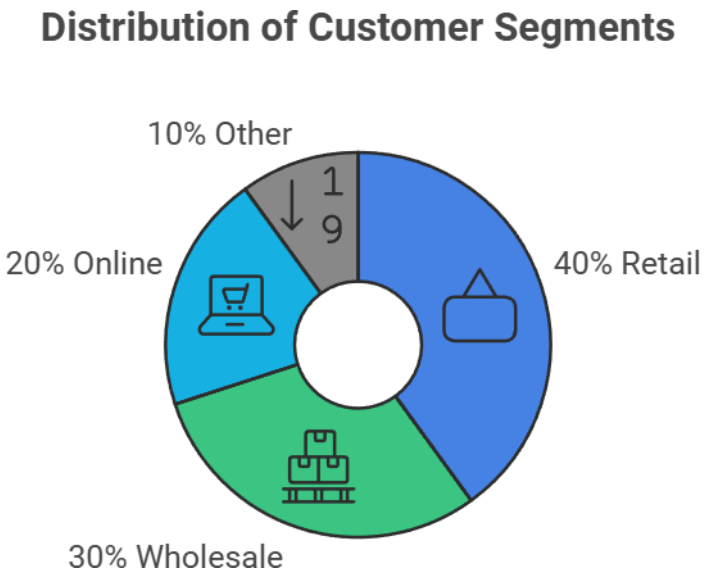


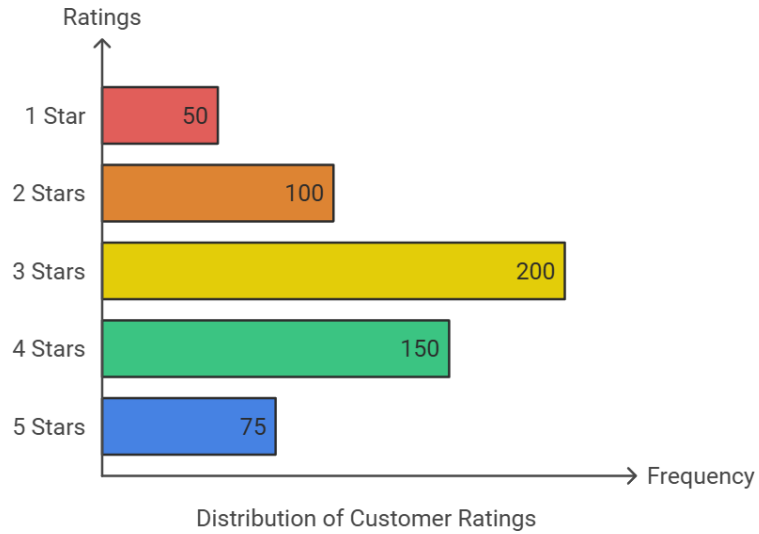
Data Cleaning and Transformation Process



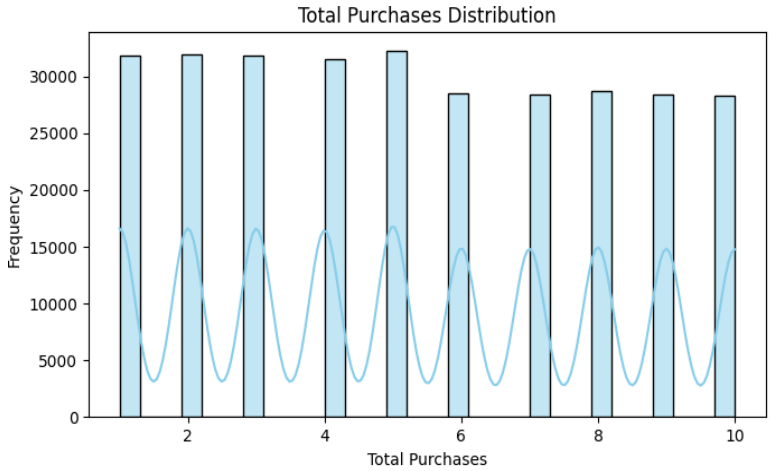
Dataset Insights Visualization

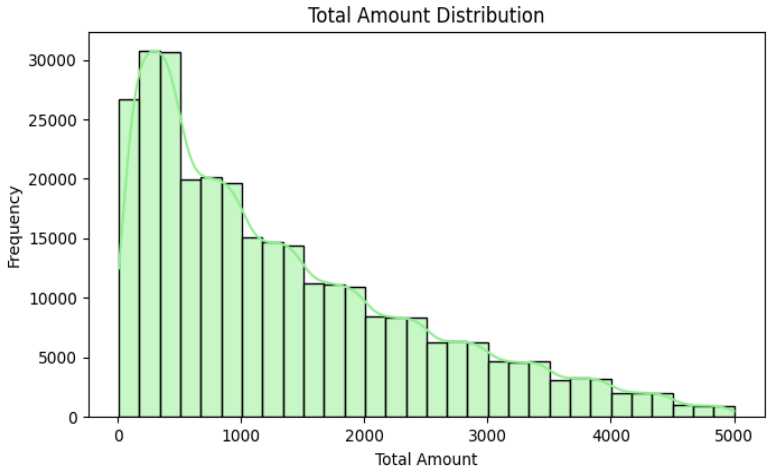


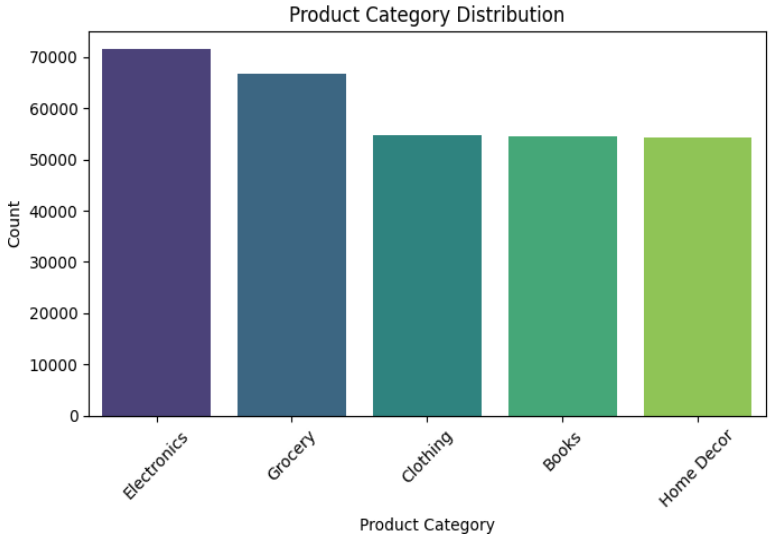


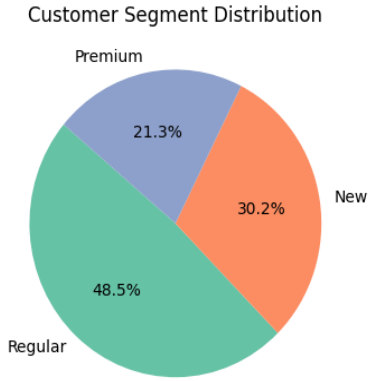


Key Distributions In The Data









TechRetail Sales Analytics Dashboard

TechRetaiI Sales Analysis

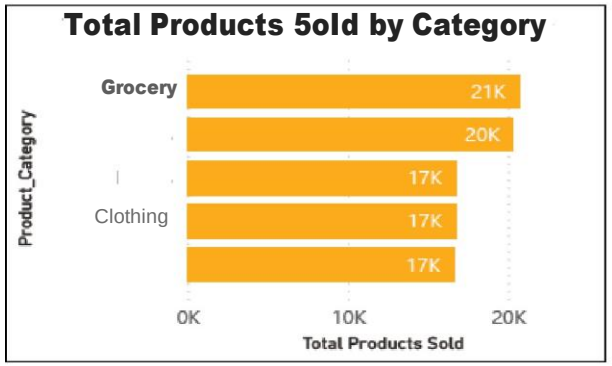
Key Metrics for Business Insights

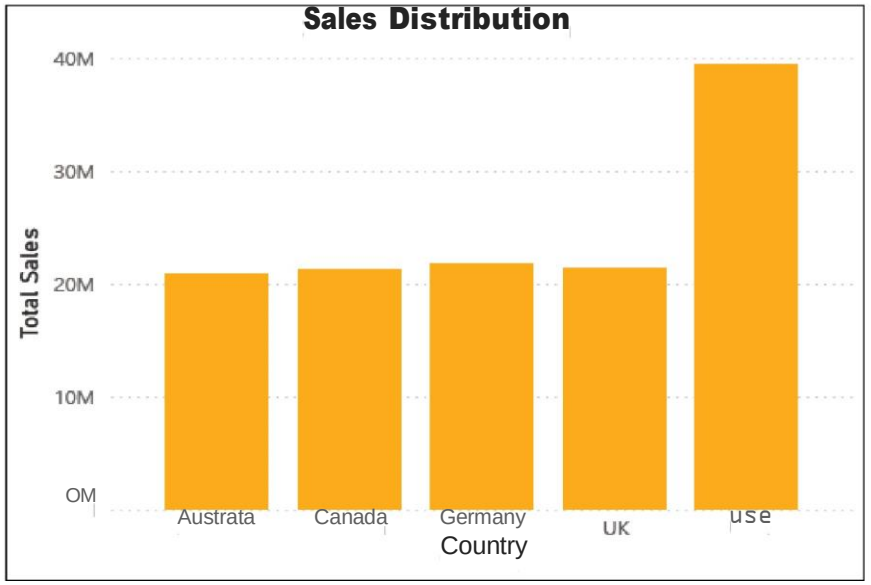
Total Revenue
124.70M

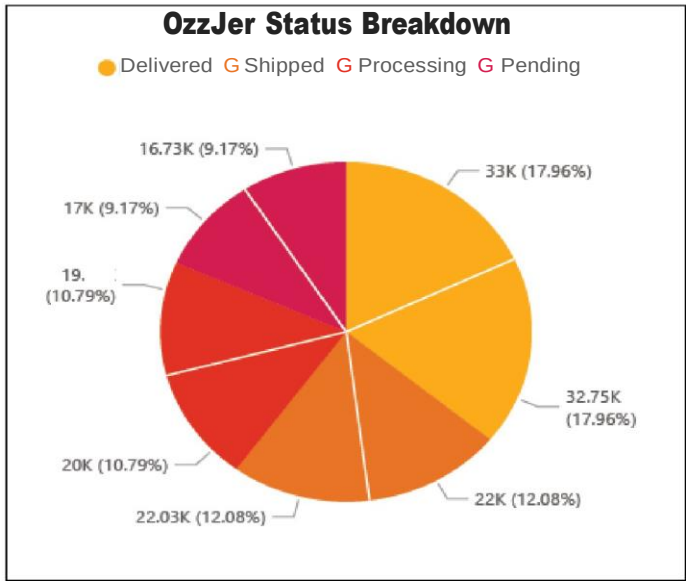
Total Transactions
90K

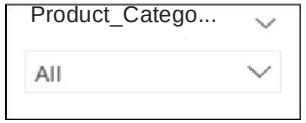
ATV
J.38K

Average Age
35.83









THANK YOU