

BUDGET SALES ANALYSIS



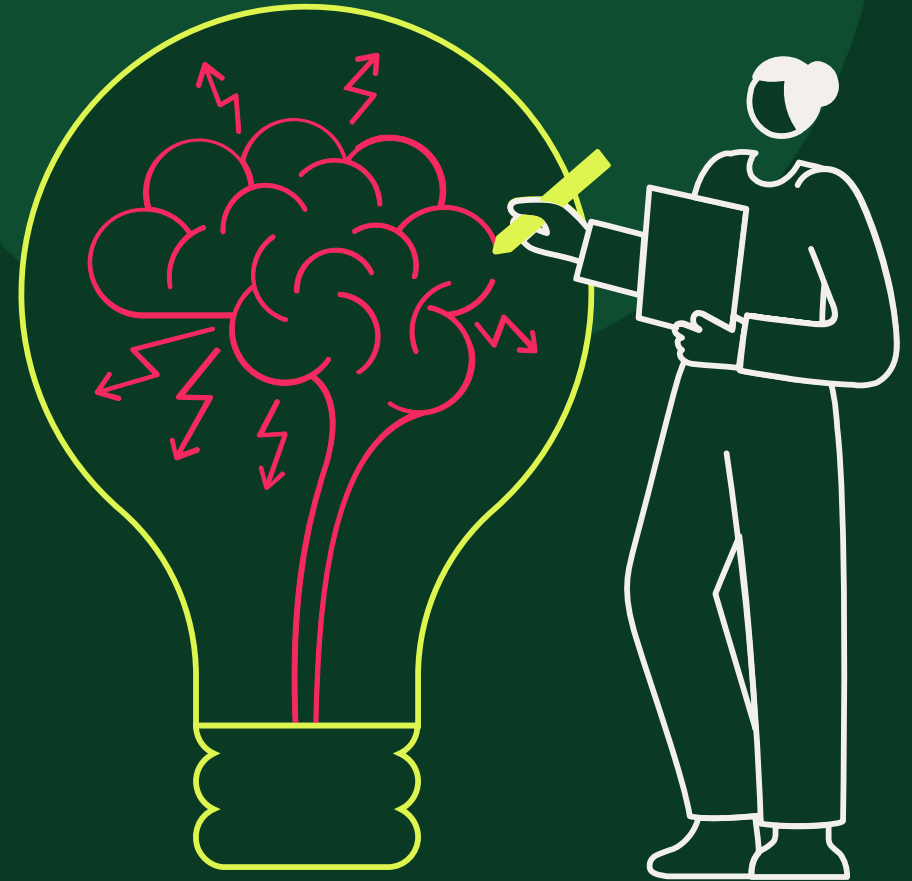
Agenda

- Objective
- Problem Statement
- The process
- KPI
- Insights
- Conclusion



Objective

- The collection includes records for sales orders, customer information, product information, and geographical data.
- To deduce important metrics and patterns in the dataset, this project will use the provided data to perform ETL and data analysis.
- Additionally, several visualizations and reports are created to represent significant linkages.





Problem Statement

- Our "Domain Sale" process is structured to help potential buyers purchase the domain they want immediately without the hassle of contacting the seller directly.
- A seller lists a domain for sale at a specific price in our Marketplace. An interested buyer sees this domain for sale and decides to buy it.

The Process



Data
Collection

Data
Cleaning

Data
Analysis

Insights



Data Collection

This step involves extracting the data from different sources relevant to the problem statement or obtaining data from the client.

It consist of:

Dataset 1: AdventureWorks_Database

Columns:

ProductKey, OrderDate, ShipDate, CustomerKey, PromotionKey, SalesTerritoryKey, SalesOrderNumber, SalesOrderLineNumber, orderQuantity, UnitPrice, TotalProductCost, SalesAmount, StandardCost, List Price, diff std cost and diff list price.

Dataset 2: Budget

Columns: Category, Subcategory, ProductName and Jan-Dec, 2016



Data Cleaning

Python Analysis Process

Importing analysis-related Python libraries like Pandas, Numpy, Plotly, etc.

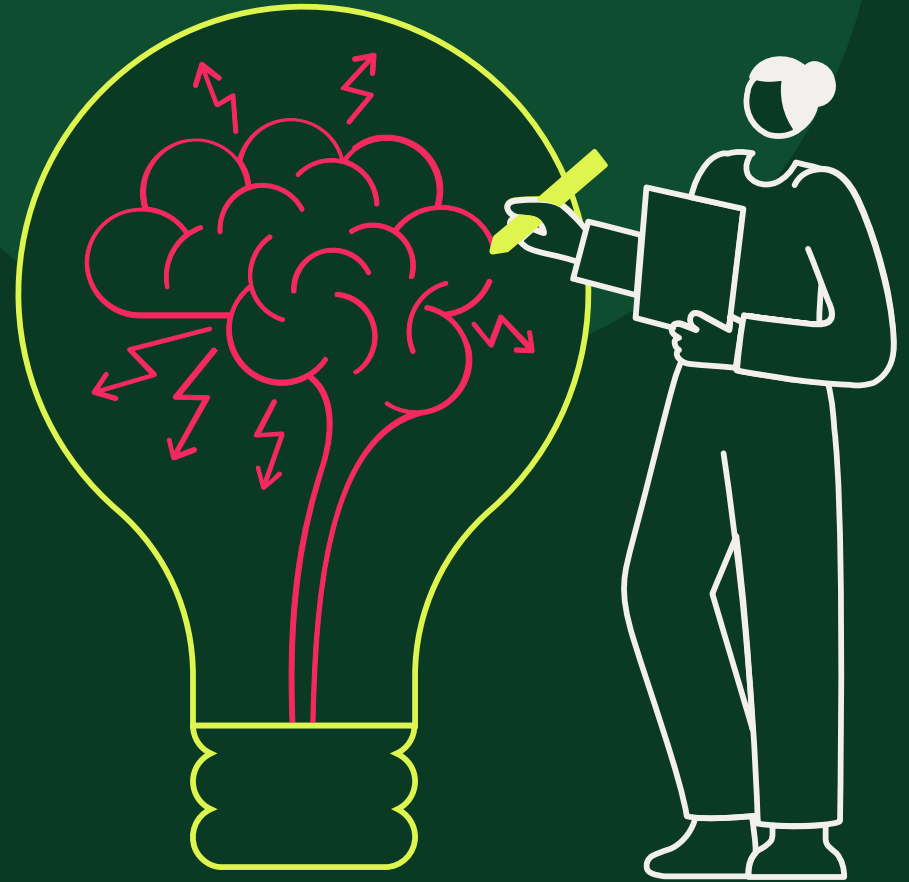
Data Wrangling: Gathering, assessing, handling missing data, and adding columns.

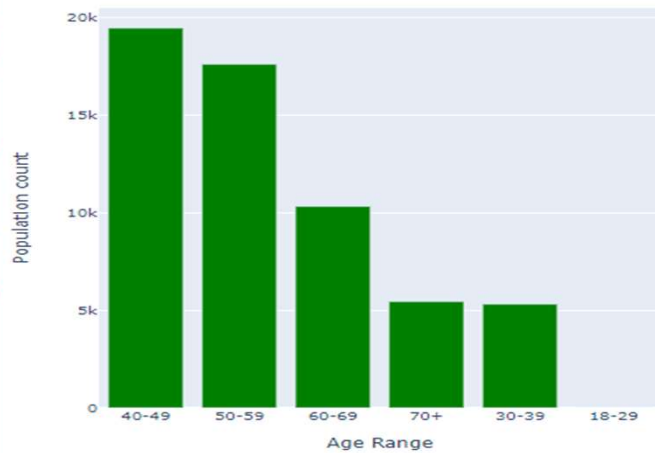
Exploring Data: Performing data analysis using Python libraries and Business Intelligence tools like Power BI.

Data Modelling: Connecting multiple data sources in BI tool using relationships for creating visualizations.

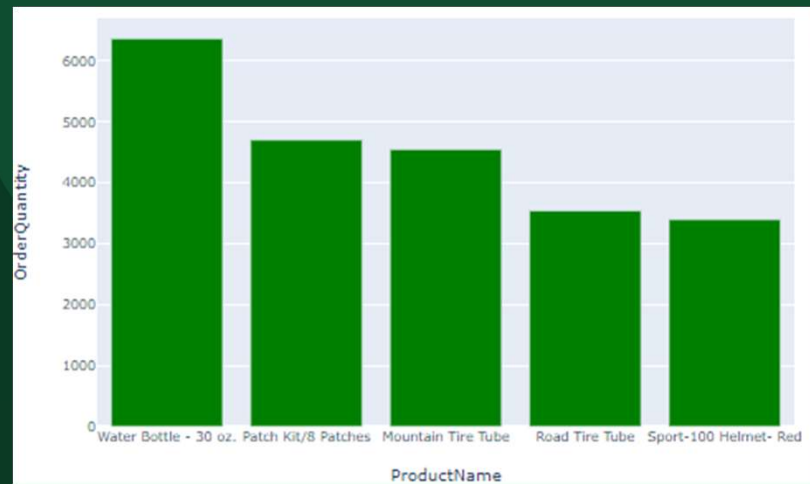
Deployment: Preparing visualizations for public availability on powerbi.microsoft.com site.

Data Analysis

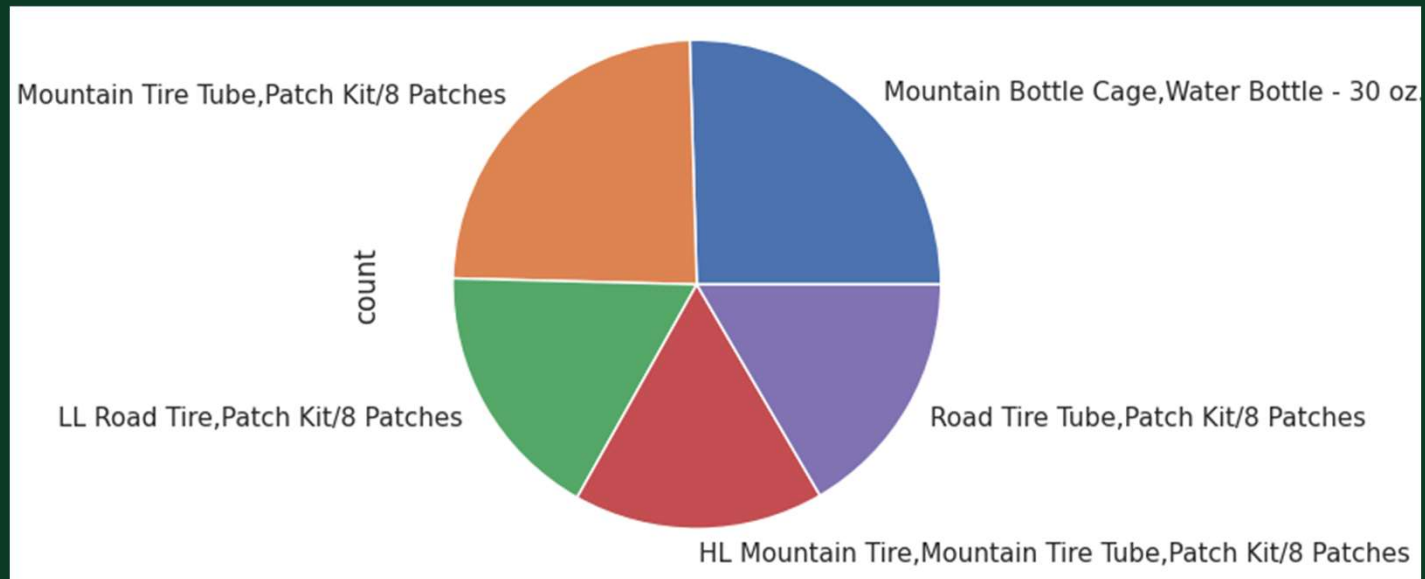




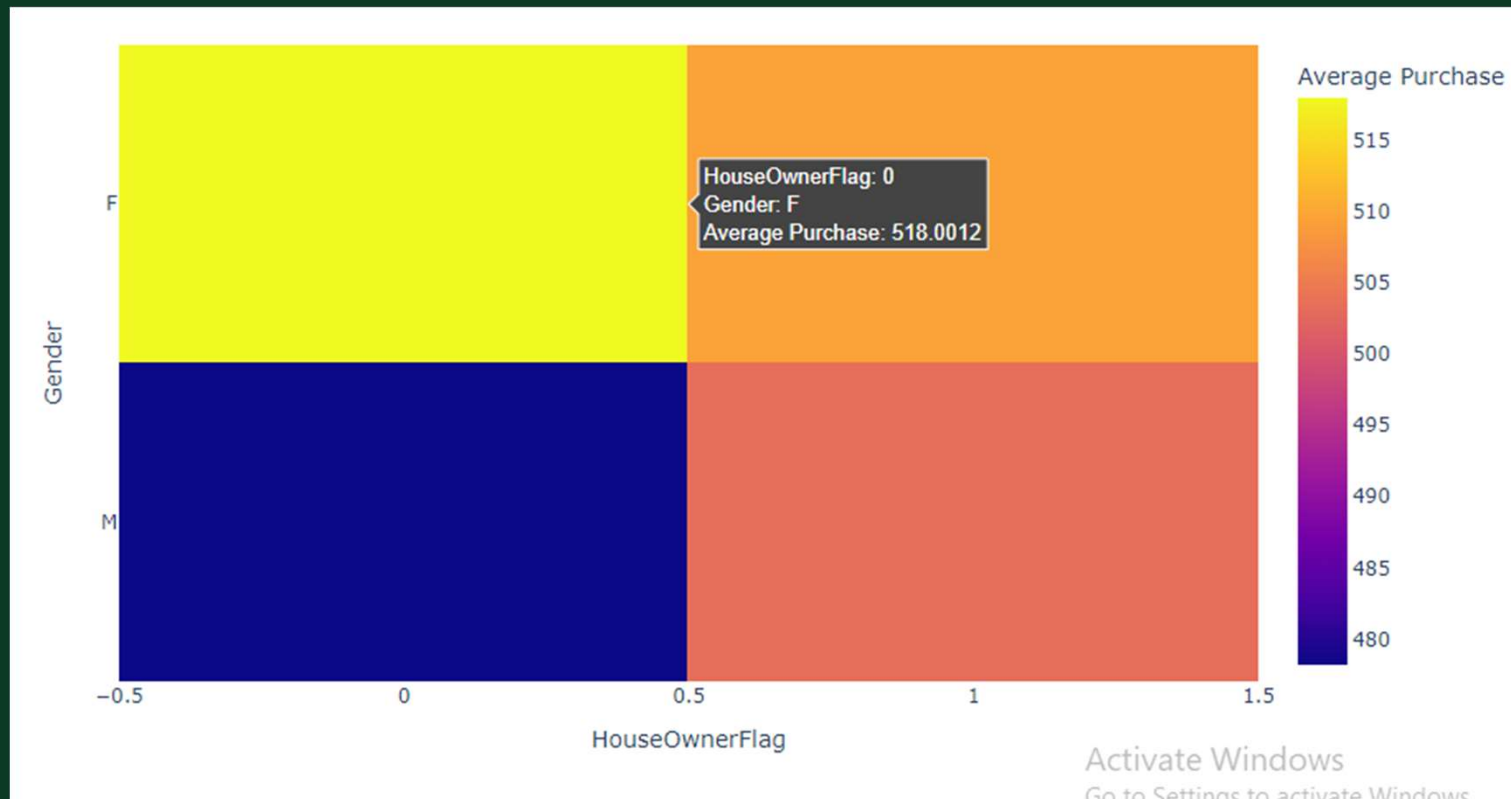
A sizable portion of the clientele is made up of people between the ages of 40 and 59



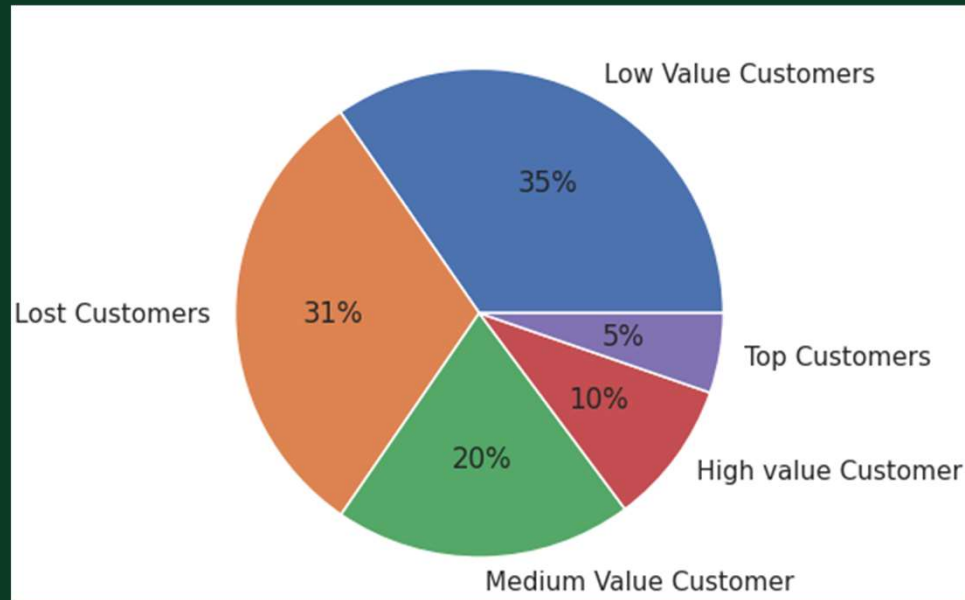
Top selling 5 companies



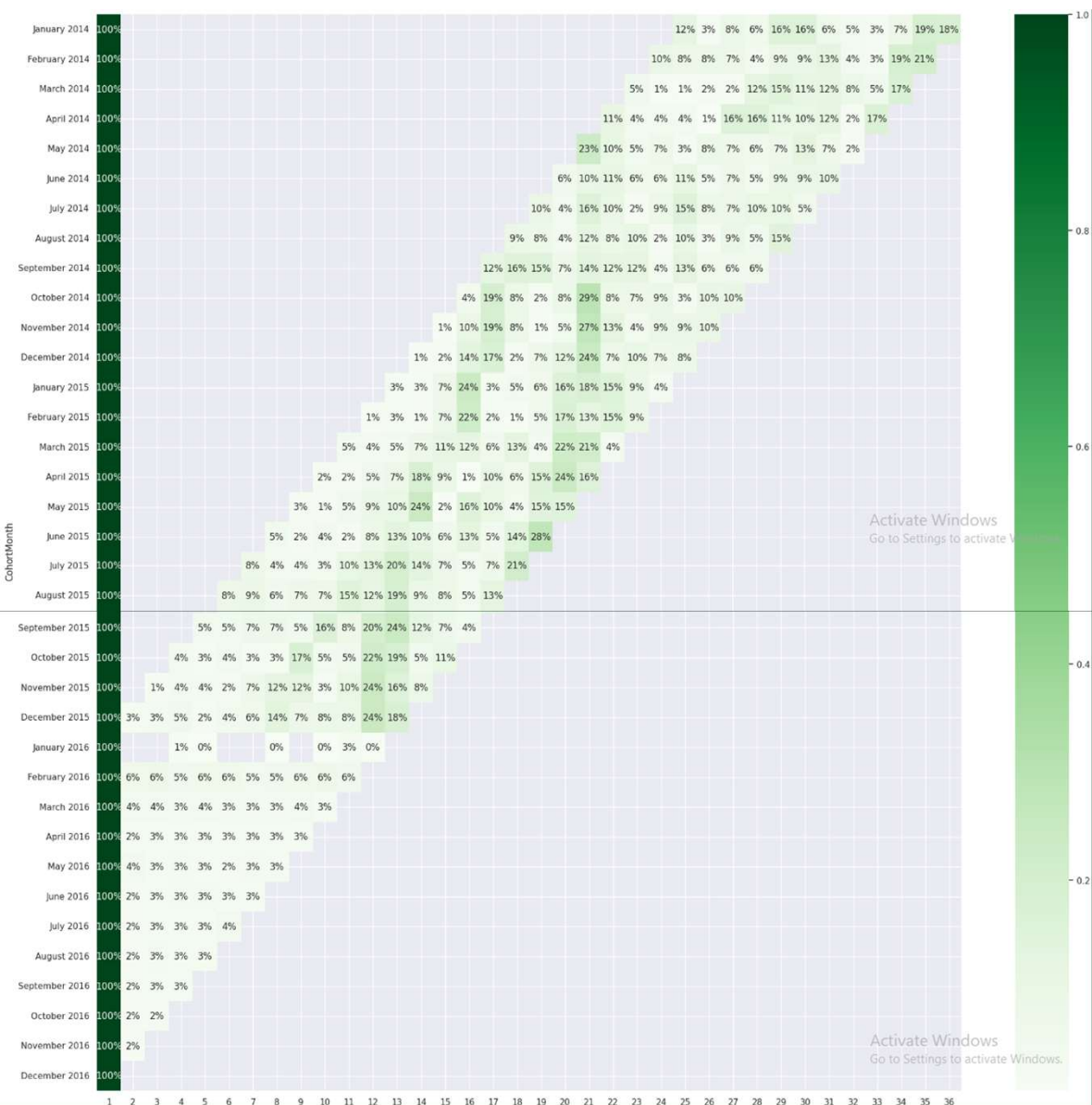
The above product can be sold in a bundle or a combined package for discount



It's interesting to note that the average amount spent by men without permanent addresses is low, whilst the average amount spent by women without permanent addresses is higher

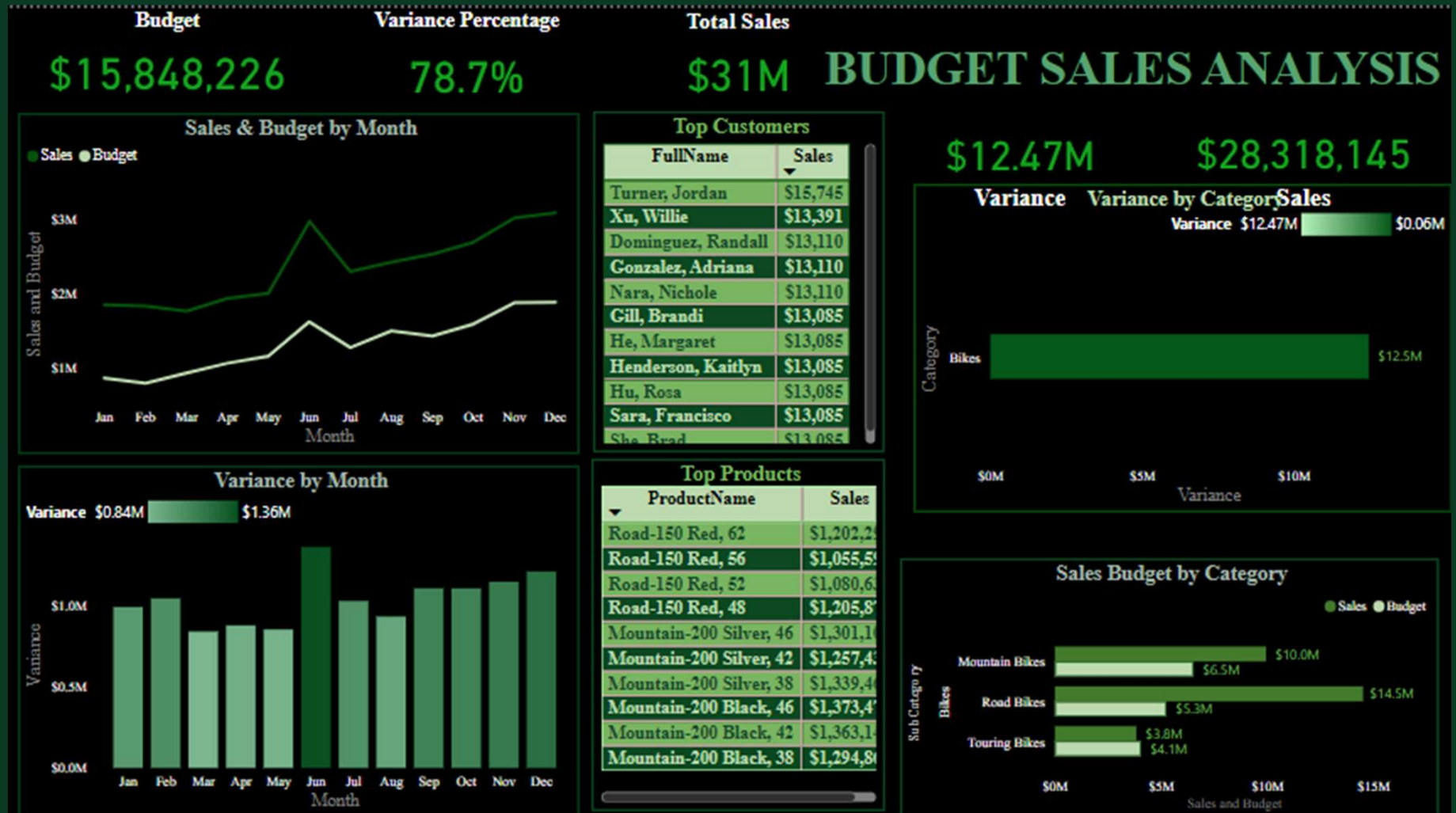


According to the customer segmentation described above, approximately 15% of our clients are high value clients, whereas most of our clientele are low value and lost clients

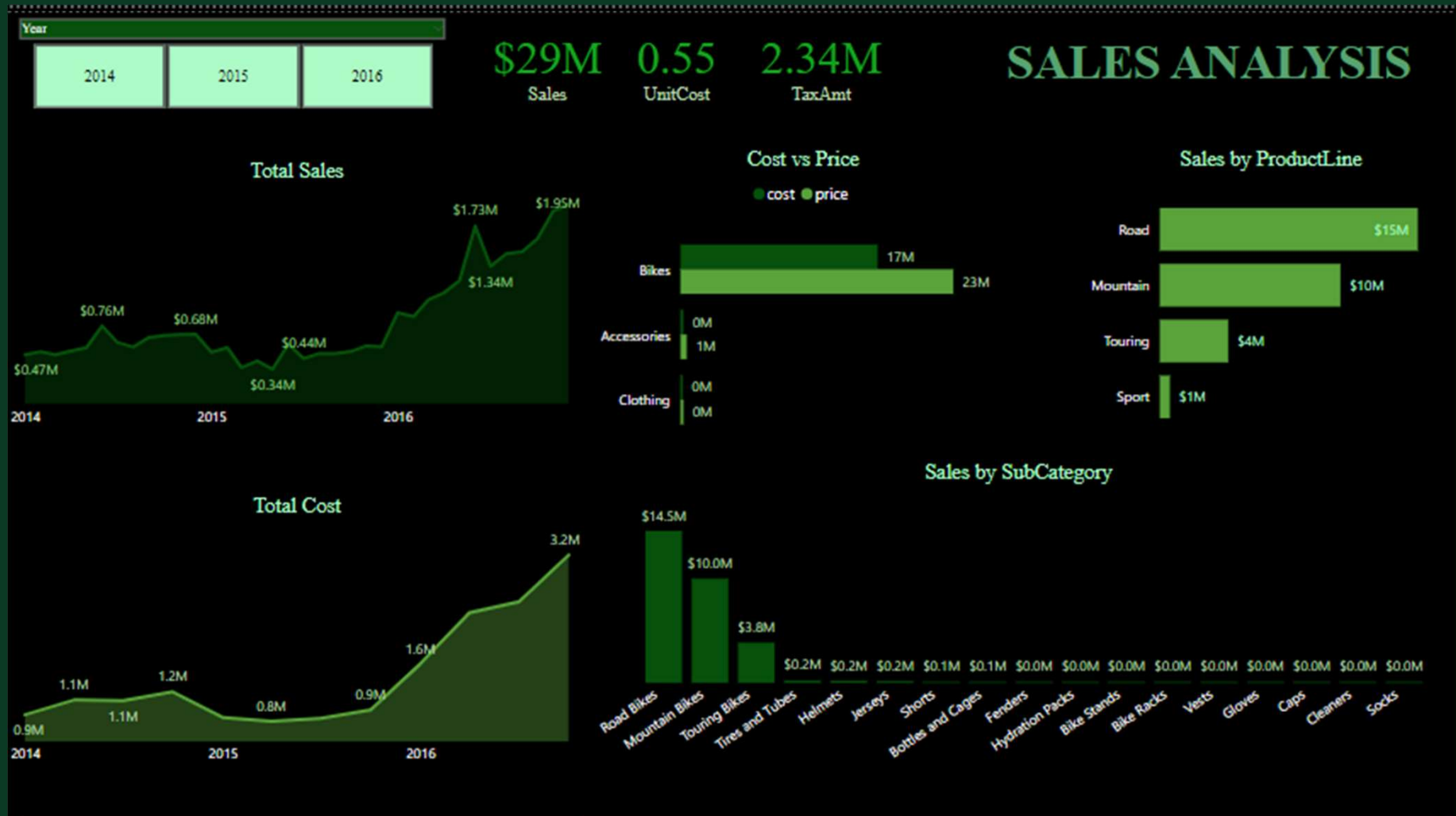


We can infer from the heatmap above that client retention in 2014 was subpar. Since August of 2015, we have noticed some customers returning, though not in large numbers. 2016 brought about a slight improvement in retention.

Dashboard 1: Budget Analysis



Dashboard 2: Sales Analysis



Dashboard 3: Profit Analysis



Dashboard 4: Variance Analysis

\$12.44M

Variance

73.7%

Variance%

Variance and Revenue by Category

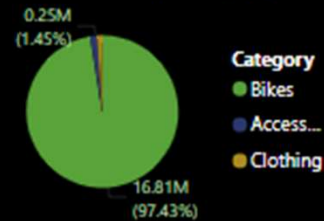
● Variance ● Revenue



Variance by Month



Variance by Category



VARIANCE ANALYSIS

Sales by Product & Variance to target

Category	SubCategory	Sales	Target Amount	Variance	Variance%
Accessories	Bike Racks	\$36,960	\$36,861	\$99.00	0.3%
	Bike Stands	\$37,842	\$38,757	(\$915.00)	-2.4%
	Bottles and Cages	\$55,031	\$57,369	(\$2,338.19)	-4.1%
	Cleaners	\$6,869	\$6,465	\$403.80	6.2%
	Fenders	\$44,268	\$43,670	\$597.72	1.4%
	Helmets	\$215,923	\$221,905	(\$5,981.71)	-2.7%
	Hydration Packs	\$38,823	\$39,803	(\$980.06)	-2.5%
	Tires and Tubes	\$231,300	\$242,777	(\$11,477.24)	-4.7%
	Total	\$687,016	\$687,607	(\$591.60)	-0.09%
Bikes	Mountain Bikes	\$9,952,760	\$6,534,364	\$3,418,395.56	52.3%
	Road Bikes	\$14,520,584	\$5,257,897	\$9,262,687.04	176.2%
	Touring Bikes	\$3,844,801	\$4,055,965	(\$211,163.95)	-5.2%
	Total	\$28,318,145	\$15,848,226	\$12,469,918.65	78.7%
Clothing	Caps	\$18,834	\$20,371	(\$1,536.95)	-7.5%
	Gloves	\$33,380	\$33,965	(\$585.13)	-1.7%
	Jerseys	\$165,066	\$170,938	(\$5,871.79)	-3.4%
	Shorts	\$67,050	\$68,453	(\$1,402.58)	-2.0%
	Socks	\$4,882	\$5,449	(\$567.43)	-10.4%
	Vests	\$33,465	\$34,565	(\$1,100.50)	-3.2%
	Total	\$322,677	\$333,741	(\$11,064.38)	-3.3%
Total		\$29,307,837	\$16,869,574	\$12,438,262.59	73.7%

Dashboard 5: Customer Analysis



KPI

- Sales trend line
- Cost trend line
- Average unit cost and price
- Revenue generated by Subcategory
- Sales by Product Line
- Revenue contribution by region
- Profit contribution by region

- Profit % by region
- Current year profit margin vs difference in last year's profit margin
- Total orders
- Total revenue
- Variance to target comparison by category
- Variance by month line chart

KPI

- Actual sales and target sales matrix
- Cohort analysis
- Customer retention line chartable.

- Monthly spending trend
- Average monthly spend distribution

Conclusion



- A sizable portion of the clientele is made up of people between the ages of 40 and 59
- The year 2016 saw an exponential surge in sales
- High quantity of products is ordered from Australia and United States
- Major Profit is contributed by the Bike Category
- The average order has a gap of 7 days between the day the order is ready for export from the factory and the date it was shipped
- Maximum profit earned in the months of June, November, and December
- High sales orders are seen on Wednesday and Saturday, when compared to other weekdays

Conclusion



- There is a high negative correlation between Price and number of Quantity ordered
- The average amount spent by men without permanent addresses is low, whilst the average amount spent by women without permanent addresses is higher
- Age range of 40-49 and 50-59 is shows high demand compared to other age group
- High salary range leads to increase in revenue
- Customers with a high school diploma and modest annual income buy more products than people with bachelor's degrees
- According to the customer segmentation described above, approximately 15% of our clients are high value clients, whereas the majority of our clientele are low value and lost clients

Conclusion



- Client retention in 2014 was subpar
- 2016 brought about a slight improvement in retention

Thank you

