Budget Sales Analysis - BI PROJECT

Project related Q & A

Data Source ?
https://drive.google.com/drive/folders/165Pjmfb9W9PGyorZjHEA22LW0Lt3Y-Q8?usp=sharing

1. Libraries used in Python? - Pandas, NumPy and Matplotlib
2. Type of Data ? - Both Numerical and categorical data involved.
3. What techniques were you using for data?
    a. Removing unwanted attributes
    b. Visualizing relation of independent variables with each other and output variables
    c. Removing outliers, cleaning data and imputing if null values are present.
    d. Converting Numerical data into Categorical values.

Project Details

Project Title	Budget Sales Analysis
Technology	Business Intelligence
Domain	Retail
Project Difficulty Level	Advanced
Programming Language used	Python
Tools Used	Google Colab, Data studio, Excel, MS PowerPoint

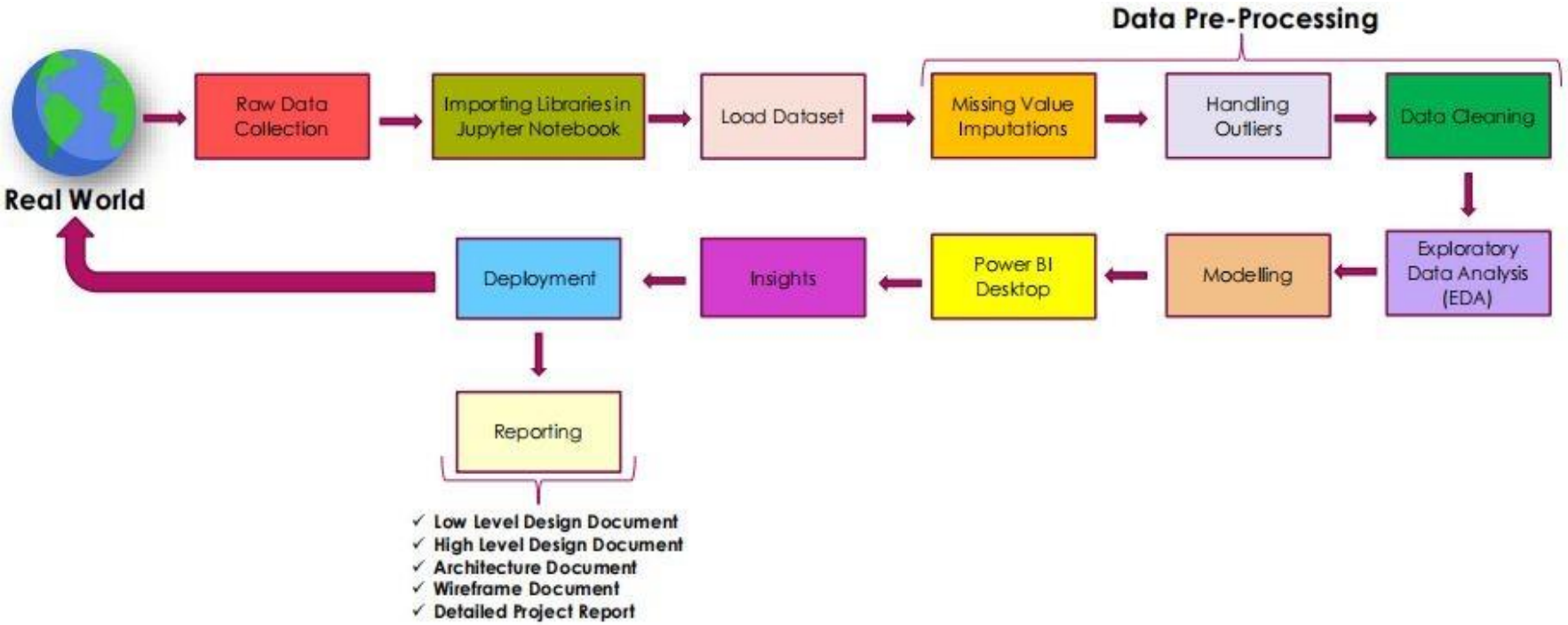
OBJECTIVE

Today people are more aware of the things they are supposed to do in order to live a healthy life. Lately people have got to know the health benefits of riding bike in there day to day life. We will be analyzing the sales data of a company which majorly focuses on cycle as their main category. To achieve this goal, we used a data set that is formed by taking into consideration some information of customer details, Date specific details and country specific sales data etc. we have to Extract various information such as Sales, budget, variance.

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.

Architecture



Dataset Information

1 - **Product Key:** Unique identification number of each product

2 - **OrderDate:** Date on which order was placed by the customer

3 - **ShipDate:** Date on which order was Shipped by the Retailer or Supplier

4 - **Customer key:** Unique identification number of each customer

5 - **Promotion Key:**

6 - **Sales Territory Key:** Unique identification number given to each Territory

7 - **Sales Order Number:** unique identification number attached to every order

8 - **Sales Order Line number:**

9 - **Order Quantity:** Quantity ordered of specific product

10 - **Unit Price**: Sales price of each product

11 - **Total Product Cost:** Cost required to manufacture the product

12 - **Sales Amount:** Revenue generated by the sale of a specific product

13 - **Tax amount:**

14 - **Year:** Year in Which the order was placed (Y - 2014,15,16)

Continued.....

15 - **Quarter:** Quarter of the year in which the order was placed(Q -1,2,3,4)

16 - **Month:** Month of the year in which the order was placed

17 - **Fiscal Year:** Fiscal Year in which the order was placed

18 - **Fiscal Quarter:** Fiscal Quarter in which the order was placed

19 - **Weekday:** Week day on which the order was placed

20 - **Week day weekend:** (Sunday / Saturday)

21 - **Marital Status:** Married(M) or Single(S)

22 - **Yearly Income:** Yearly income of the customer

23 - **Occupation:** Main Occupation of the customer

24 - **Product Name:** Name of the product

25 - **Subcategory:** Category under which the products falls

26 - **Region:** Region from where the order was placed

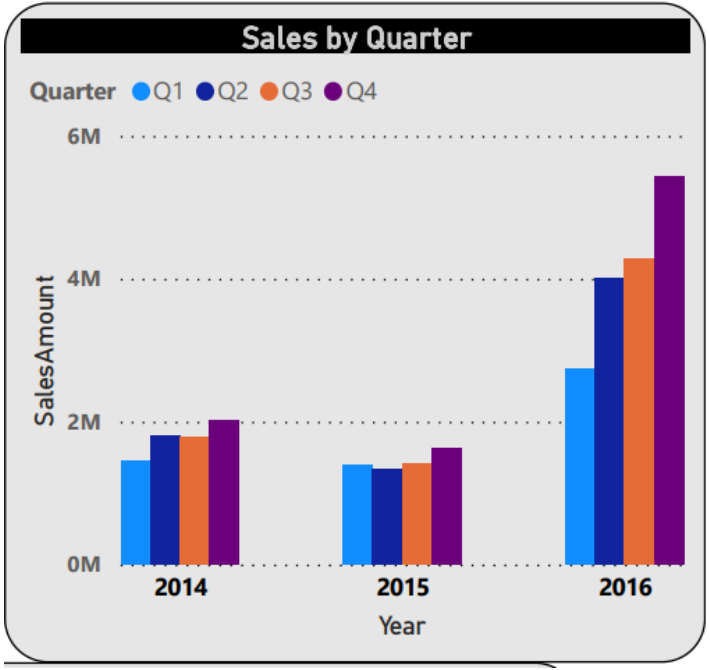
27 - **Country:** Country from where the order was placed

28 - **Group:** Continent specific orders

29 - **Education** Highest Qualification of the customer who ordered the Product

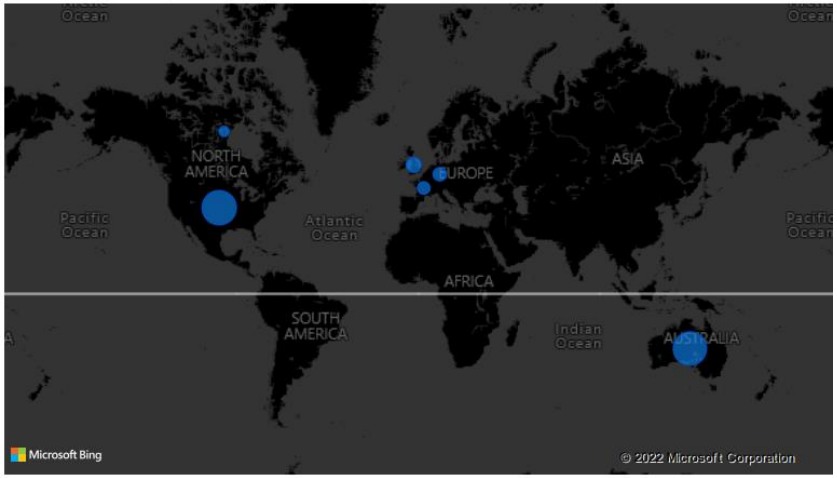
Data Insights
Q-O-Q sales analysis?

- We have sales data for three year
- Sales substantially increased in 2016 Q-o-Q



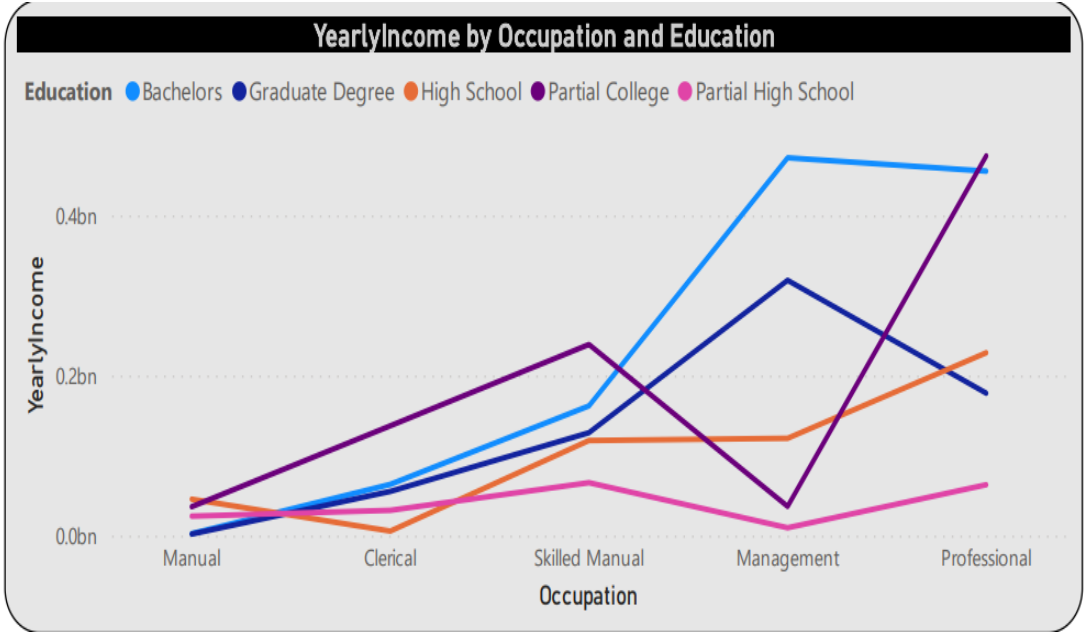
Data Insight

- Australia and US comprises of 60% of total sales



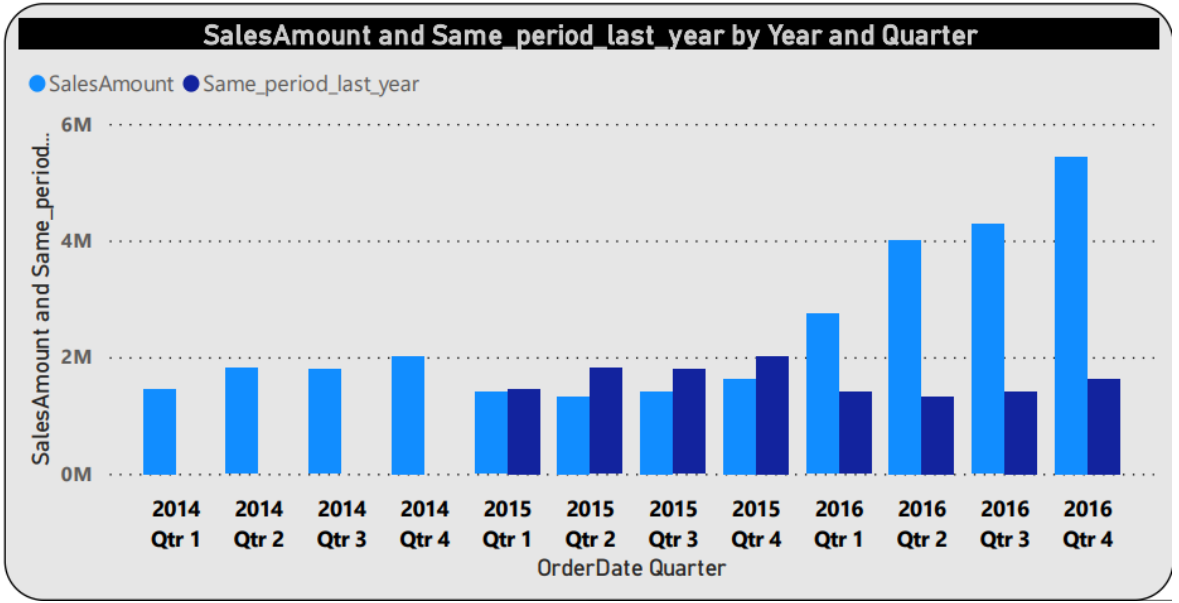
Data Insight
What is yearly income status and Qualification of all the Customers ?

- Manual jobs pay the least while people in management and Professional service are payed the highest.
- People with bachelor degree in management services are the one who are payed the highest of all



Data Insight
Quarter on Quarter Sales data?

- Quarter on Quarter Sales data for three years



Key Performance Indicator (KPI)

1. *Total Amount of sales for the year 2014,15,16 based on Gender*
2. **Total Sales per year**
3. *Avg Order Value basis Region*
4. *Profit per region*
5. *Data for Top 10 product by sales per year*
6. *Category based sales data*
7. *Sales analysis based on weekend and weekday*
8. *Promotions data analysis*
9. *Sales based on yearly income*
10. *Sales analysis based on home owner status*
11. *Sales analysis based on Occupation and Marital Status*
12. *Top 10 products bought by male and females*

Conclusion

1. It is clear that as number of unique orders being higher for 2016 as compared to 2015 and 2014, total sales amount is the highest for the year 2016 follwed by 2014 and 2015 resp
2. Increase in the category portfolio has resulted an increase in sales for the year 2016.
3. Avg Order value in Austrailia and Europian countries is higher than North American countries
4. Company has earned most of its profit from US and Australia.
5. Clearly Mountain Bikes,Road Bikes and touring bikes are the most sold product in each year
6. Category portfolia expantion took place in the year 2016 before which sales was purely based on very limited number of category.
7. Sales are almost similar on both weekday and week-end.
8. Sales in Jan month are the highes amount as compared to all other months.
9. Most of the offers on all the products are by the year end
10. Looks like People from the middle class income bracket are more interested in riding cycles.
11. Clearly majority of the buyer are homeowners

12. Singles have surpassed married in sales.
13. Both male and female's have similar choice when it comes to bike selection
14. Moreover people in Management and Professional Occupation are the top buyers.

THANK YOU