



DETAILED PROJECT REPORT

BUDGET SALES ANALYSIS

HARSH PIMPALKAR

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.

OBJECTIVES

- The collection includes records for sales orders, customer information, product information, and geographical data.
- In order 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

BENEFITS

- Help in making wiser business decisions.
 - Aid in customer satisfaction and trend monitoring, which can serve current consumers and attract new ones.
 - Greater client base understanding is provided.
 - Facilitates seamless resource management flow
-

DATA ATTRIBUTES

CUSTOMER

Customer Key	Full Name	Birthdate	MaritalStatus
Gender	Yearly Income	Total Children	Number Childern At Home
Education	Occupation	House Owner Flag	Number Cars Owned
Date First Purchase	Commute Distance		

PRODUCT

Product Key	Product Name	SubCategory	Category
List Price	Days To Manufacture	Product Line	Model Name
Product Description	Start Date		

TERRITORY

Sales Territory Key	Region	Country	Group
---------------------	--------	---------	-------

DATA ATTRIBUTES

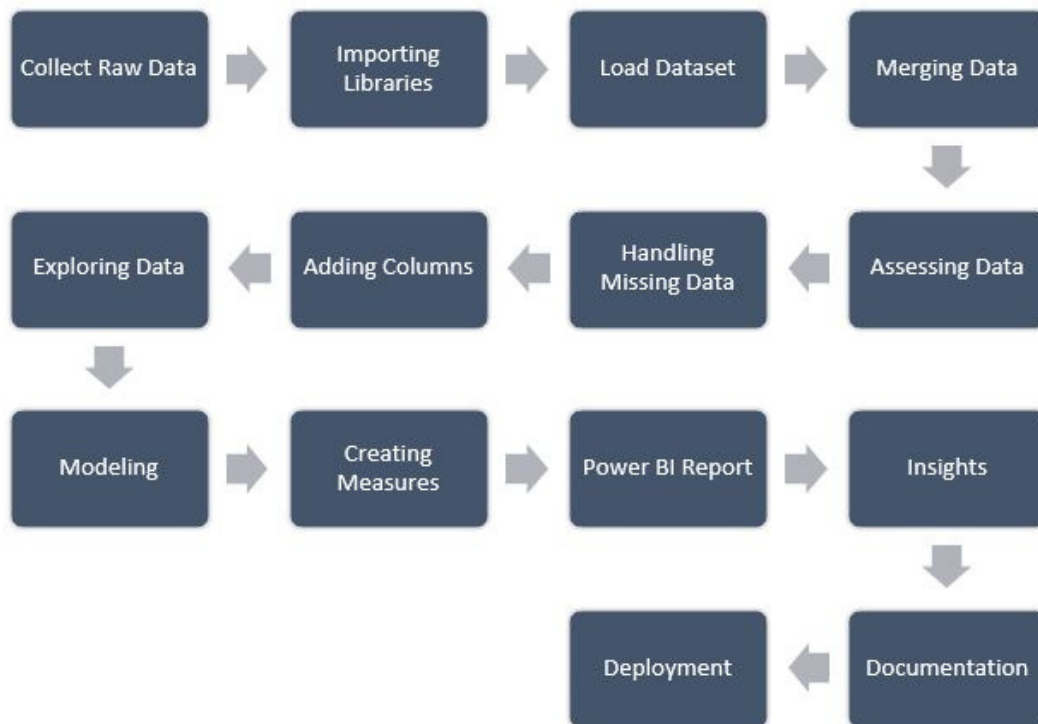
SALES

Product Key	Order Date	Ship Date	Customer Key
Promotion key	Sales Territory Key	Sales Order Number	Sales Order Line Number
Order Quantity	Unit Price	Total Product Cost	Sales Amount
Tax Amount			

DATASET INFORMATION

- **CUSTOMERKEY:** PRIMARY KEY FOR CUSTOMER DATASET
- **BIRTHDATE:** BIRTHDATE OF THE CUSTOMER
- **MARITALSTATUS:** M- MARRIED / S - SINGLE
- **GENDER:** M – MALE / F – FEMALE
- **TOTALCHILDREN:** TOTAL NUMBER OF CHILDREN
- **NUMBERCHILDRENATHOME:** NUMBER OF CHILDREN STAYING WITH THEIR PARENTS
- **EDUCATION:** EDUCATION QUALIFICATION
- **OCCUPATION:** PRESENT OCCUPATION
- **HOUSEOWNERFLAG:** 1– OWNS HOUSE / 0- DOESN'T HAVE A PERMANENT ADDRESS
- **NUMBERCARSOWNED:** NUMBER OF CARS OWNED BY THE CUSTOMER
- **DATEFIRSTPURCHASE:** FIRST DATE OF THE ORDER BY THE CUSTOMER
- **PRODUCTKEY:** PRIMARY KEY FOR THE PRODUCT DATASET
- **PRODUCTNAME:** PRODUCT NAME WITH THE COLOR OF THE PRODUCT
- **SUBCATEGORY:** SUBCATEGORY NAME OF THE PRODUCT
- **CATEGORY:** CATEGORY NAME OF THE PRODUCT
- **LISTPRICE:** THE SALE PRICE OF THE PRODUCT
- **DAYSTOMANUFACTURE:** DAYS TO MANUFACTURE THE PRODUCT AFTER RECEIVING THE ORDER
- **ORDERDATE:** DATE OF THE ORDER RECEIVED
- **SHIPDATE:** DATE WHEN THE ORDER LEFT THE FACTORY FOR EXPORT
- **SALESORDERNUMBER:** INVOICE NUMBER OF THE ORDER
- **ORDERQUANTITY:** NUMBER OF QUANTITIES ORDERED FOR A PRODUCT
- **UNITPRICE:** PER UNIT SALE PRICE OF THE PRODUCT
- **TOTALPRODUCTCOST:** COST OF THE PRODUCT
- **SALESAMOUNT:** TOTAL SALES PRICE OF THE PRODUCT
- **TAXAMT:** TAX COLLECTED FOR THE PRODUCT SOLD

ARCHITECTURE



Collect Raw Data - This step involves extracting the data from different sources relevant to the problem statement or obtaining data from the client

Data Wrangling – Contains following steps gathering data, assessing data, handling missing data and adding columns

Exploring Data – Once the data is loaded and pre-processed, we perform data analysis using python libraries and Business Intelligence tools like Power BI

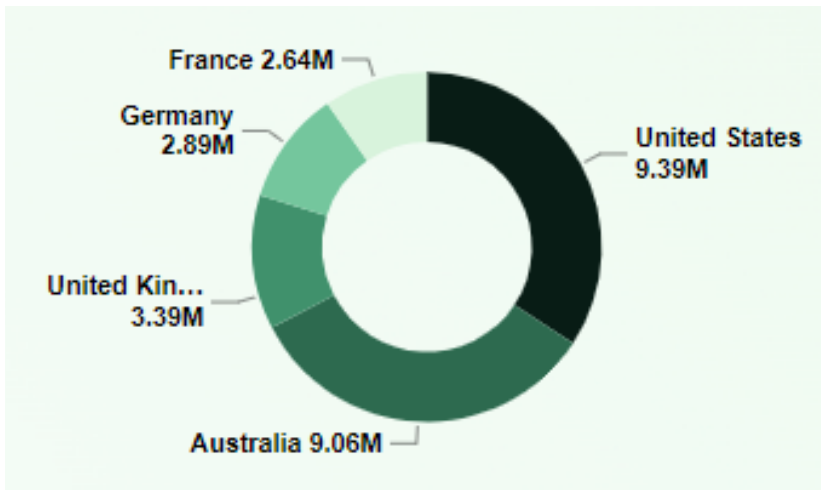
DataModelling - Data Modelling is one of the features used to connect multiple data sources in BI tools using a relationship.

A relationship define show data sources are connected with each other and you can create interesting data visualizations on multiple data sources

Deployment - The prepared visualizations are deployed on the powerbi.microsoft.com site. Where they will be available publicly

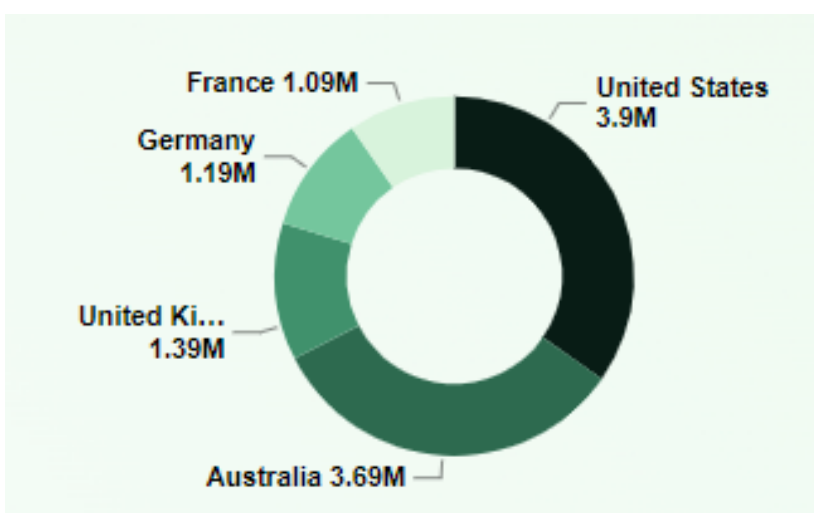
INSIGHTS

1. TOP 5 SALES BY COUNTRY



- **ACCORDING TO THE PIE CHART WE CAN CONCLUDE THE US HAS MAXIMUM SALES.**

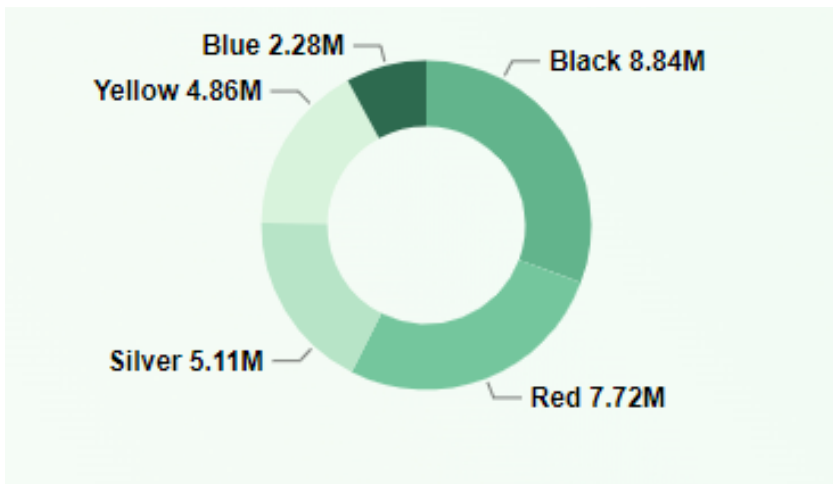
2. TOP 5 PROFIT BY COUNTRY



- **ACCORDING TO THE PIE CHART WE CAN CONCLUDE THE US & UK PROVIDING THE MAXIMUM PROF**

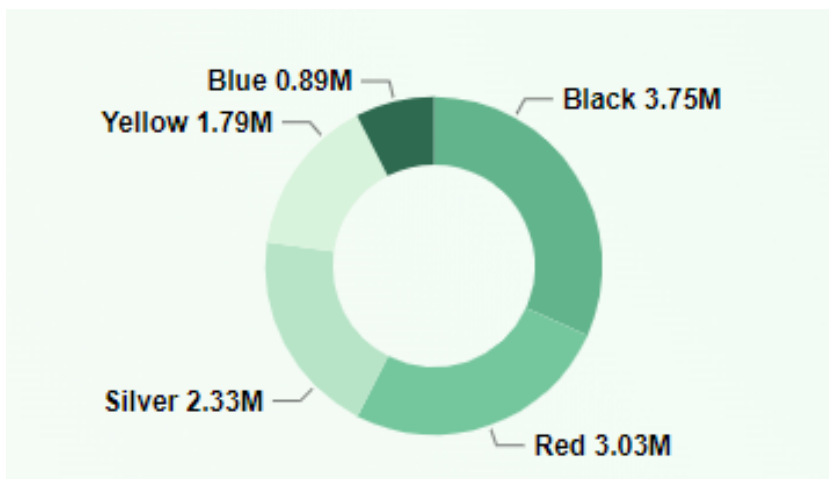
INSIGHTS

3. TOP 5 SALES BY COLOR



- **ACCORDING TO THE PIE CHART WE CAN CONCLUDE THE BLACK AND RED COLOR HAS MAXIMUM SALES.**

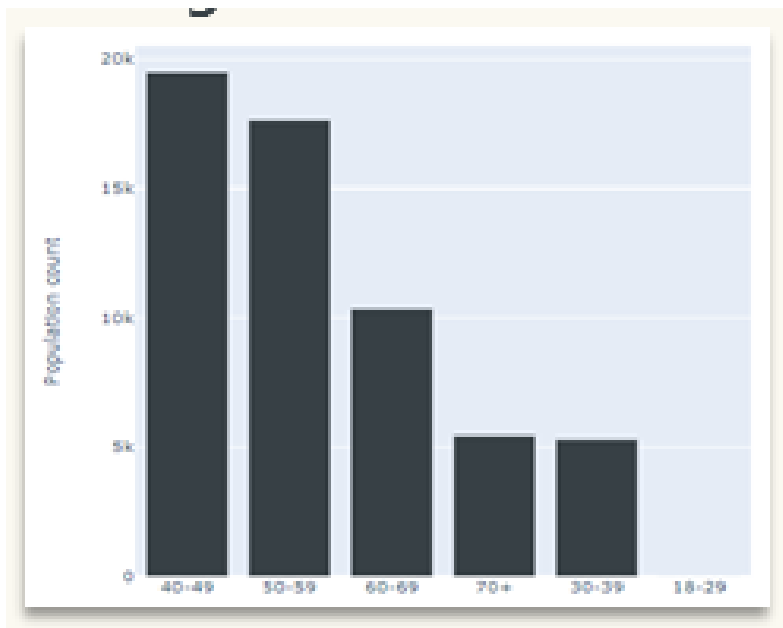
4. TOP 5 PROFIT BY COLOR



- **ACCORDING TO THE PIE CHART WE CAN CONCLUDE THE BLACK AND RED COLOR HAS MAXIMUM PROFIT.**

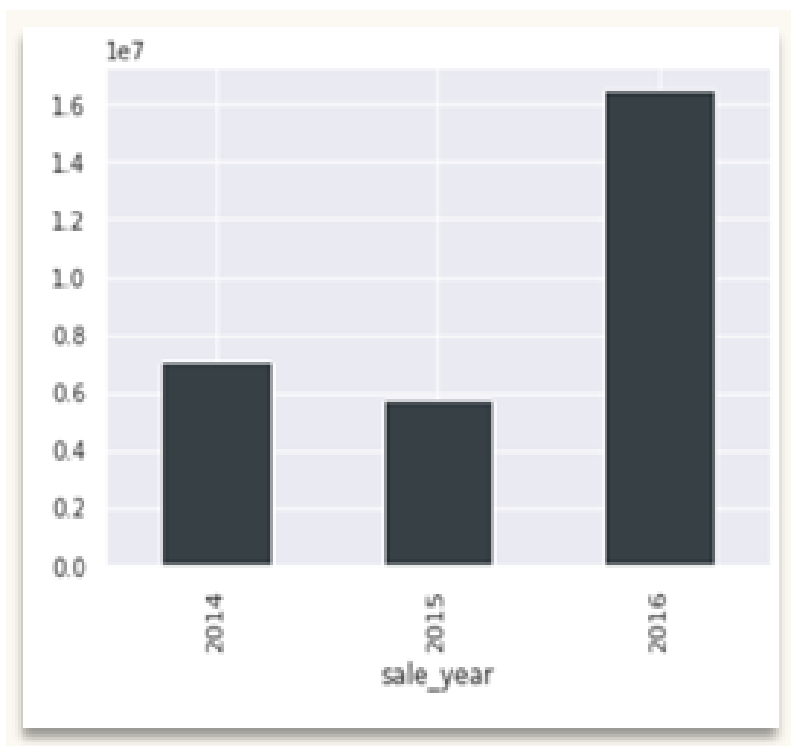
INSIGHTS

5. AGE DISTRIBUTION



- A SIZABLE PORTION OF THE CLIENTELE IS MADE UP OF PEOPLE BETWEEN THE AGES OF 40 AND 59

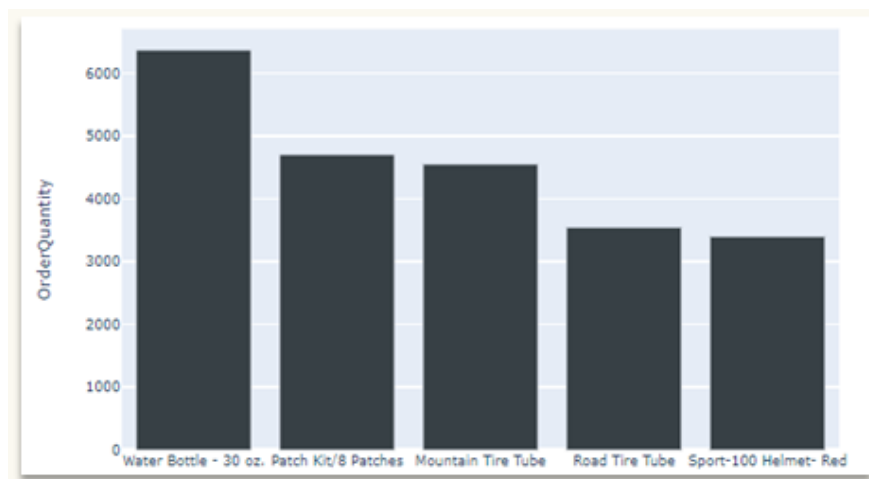
6. YEAR WISE SALES



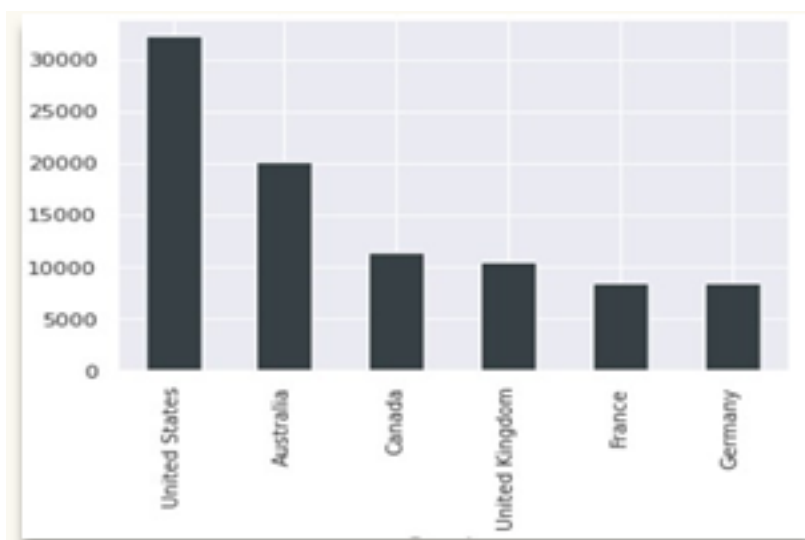
- THE YEAR 2016 SAW AN EXPONENTIAL SURGE IN SALES

INSIGHTS

7. TOP 5 SELLING PRODUCTS



8. COUNTRY WISE QUANTITY OEDERED



- **HIGH QUANTITY OF PRODUCTS IS ORDERED FROM AUSTRALIA AND UNITED STATES**

KEY PERFORMANCE INDICATOR

- **TOTAL SALES**
- **TOTAL PROFIT**
- **TOTAL COUNT OF PRODUCT**
- **TOTAL NUMBER OF CUSTOMERS**
- **PROFIT MARGIN**
- **UNIT PRICE VS. PROFIT BY CATEGORY**
- **TOTAL SALES BY CATEGORY**
- **TOTAL SALES TREND BY MONTH**
- **COST TREND**
- **ORDER TREND**
- **PROFIT TREND**
- **CUSTOMER PERFORMANCE MATRIX**
- **PRODUCT PERFORMANCE MATRIX**
- **CATEGORY PERFORMANCE MATRIX**
- **SUB CATEGORY PERFORMANCE MATRIX**
- **MODEL PERFORMANCE MATRIX**

CONCLUSION

- **THE BIKES CATEGORY IS THE MOST POPULAR, WITH MOUNTAIN BIKES OF 200CC BEING A FAVORITE FOR THE OFF-ROADING EXPERIENCE. ROAD BIKES OF 150CC ARE ALSO POPULAR.**
 - **SILVER, BLACK, AND RED ARE THE MAJORITY COLORS PROVIDING HIGHER SALES IN THE BIKES CATEGORY. WHITE AND OTHER COLORS ARE NOT CONTRIBUTING AS MUCH TO SALES.**
 - **THE CLOTHING CATEGORY IS NOT AS POPULAR, WITH SALES LOWER THAN THE OTHER TWO CATEGORIES.**
 - **ACCESSORIES PRODUCTS PLAY A SIGNIFICANT ROLE IN PROFIT RECOVERY, CONTRIBUTING TO 50% OF THE PROFIT OVER THE UNIT PRICE.**
-

CONCLUSION

- **CALIFORNIA AND NEW SOUTH WALES ARE THE TOP TWO STATES IN TERMS OF SALES, GENERATING 5.71 AND 3.93 MILLION SALES, RESPECTIVELY, WITH PROFIT MARGINS OF 41.48% AND 40.66%, RESPECTIVELY.**
- **THE US IS THE TOP-PERFORMING COUNTRY, GENERATING SALES OF 9.39 MILLION WITH AN OVERALL PROFIT MARGIN OF 41.54%. AUSTRALIA PROVIDES SALES OF 9.06 MILLION ON A PROFIT MARGIN OF 40.68%. HOWEVER, SALES ARE REALLY DOWN IN CANADA, FRANCE, AND GERMANY, AND THE COMPANY SHOULD INVESTIGATE THE REASONS FOR THE DECLINE IN SALES IN THESE COUNTRIES.**

CONCLUSION

- **BASED ON THESE INSIGHTS, THE COMPANY CAN FOCUS ON PROMOTING THE POPULAR COLORS FOR THE BIKES CATEGORY AND INCREASING SALES IN THE CLOTHING CATEGORY. THE COMPANY CAN ALSO ANALYZE THE REASONS FOR THE DECLINE IN SALES IN CANADA, FRANCE, AND GERMANY AND TAKE CORRECTIVE MEASURES TO IMPROVE SALES. ADDITIONALLY, THE COMPANY CAN CONTINUE TO FOCUS ON SELLING ACCESSORIES PRODUCTS, WHICH CONTRIBUTE SIGNIFICANTLY TO PROFIT RECOVERY. ADDITIONALLY, THE COMPANY CAN ANALYZE THE REASONS FOR THE DECLINE IN SALES IN THE NEXT YEAR AND TAKE CORRECTIVE MEASURES TO AVOID IT IN THE FUTURE.**

Q & A

Q1)THE SOURCE OF DATA?

- **THE DATASET WAS TAKEN FROM INEURON'S PROVIDED PROJECT**
- **DESCRIPTION DOCUMENT**

Q2) WHAT WAS THE TYPE OF DATA?

- **THE DATA WAS A COMBINATION OF NUMERICAL AND CATEGORICAL VALUES**

Q 3) WHAT'S THE COMPLETE FLOW YOU FOLLOWED IN THIS PROJECT?

- **REFER TO PAGE 4 FOR A BETTER UNDERSTANDING**

Q4) WHAT TECHNIQUES WERE YOU USING FOR DATA?

- **REMOVING UNWANTED ATTRIBUTES**
 - **VISUALIZING THE RELATION OF INDEPENDENT VARIABLES WITH EACH OTHER**
 - **CLEANING DATA BY REMOVING COLUMN WITH MISSING VALUES**
 - **CONVERTING NUMERICAL DATA INTO CATEGORICAL VALUES**
-