

Customer Lifetime Value Prediction

Function : #Customer Segmentation | Industry : #Retail Industry

Goal

- To identify high, medium, and low value customer segments.
- To provide personalised offers and experiences to customers.
- To allocate resources efficiently to businesses for targeting customers with the highest CLV potential and predict customer churn.

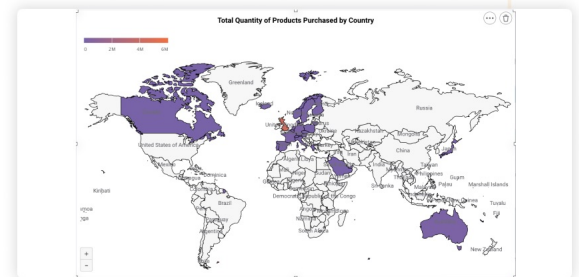
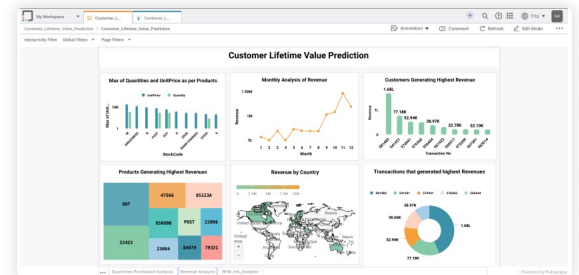
Technique

- Feature Engineering
- Segmentation Techniques
- RFM Analysis
- Clustering and classification modelling
- Visualisation

Impact

- Guided resource allocation, marketing strategies, and customer service efforts.
- Offering cross-selling and upselling to customers with CLV potentials.
- CLV helps businesses identify risks associated with over-reliance that encourages diversification and risk management strategies.

Result



Value Points

Understand the what, why, when, where & how

Exploratory Analysis

Exploratory Data Analysis On The Preprocessed Data To Derive Meaningful Data Insights

Monthly Quantity Purchased Analysis

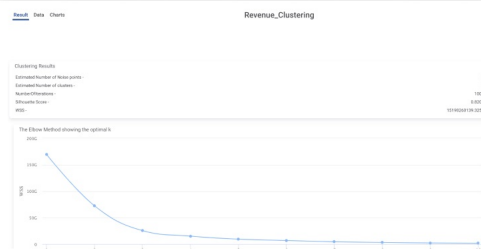


Trend analysis identifying highest sales and revenue.

Exploratory data analysis enables business owners to derive meaningful insights and making better data-driven decisions as opposed to intuitive ones.

Clustering using RFM analysis

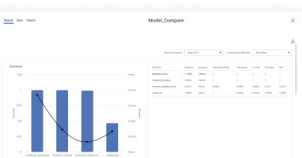
Properties (Clustering)
Task Name
Centroid_Based_Clustering...1
Independent Variables
recency
frequency
monetary



Calculate recency, frequency, and revenue and then identify clusters using customer's lifetime value obtained

RFM analysis yields dominant cluster showcasing customers with highly frequent transactions and even the high monetary transactions.

Classification



Model Fitted	Accuracy
Adaboost	46%
Gradient Boosting	100%
Random Forest	100%
Extreme Gradient Boosting	99%

Applied multiple classification algorithms and then based on accuracy metric best fit is identified

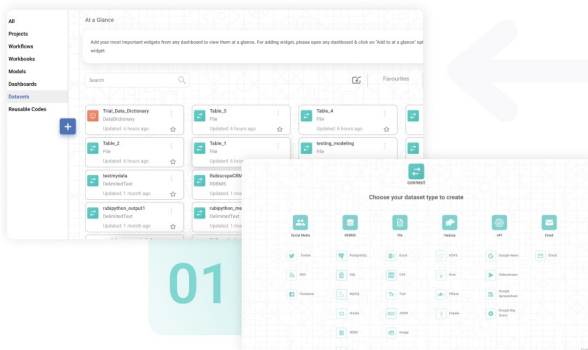
By identifying high-CLV customers, businesses can focus their marketing efforts, customer service, and retention programs on segments offering the greatest long-term value.

Multi Persona DSML Platform

For all your data needs- Data Engineering, Data Science, Data Visualisation, IoT

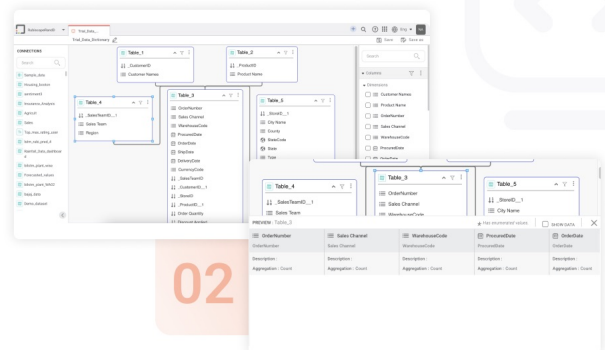


Data Connect



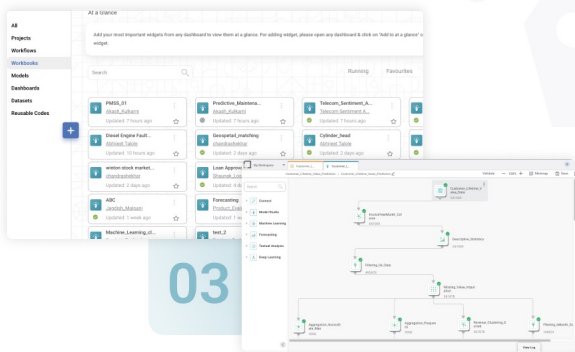
Data Source: Customer_Lifetime_Value_Prediction

Metadata Manger



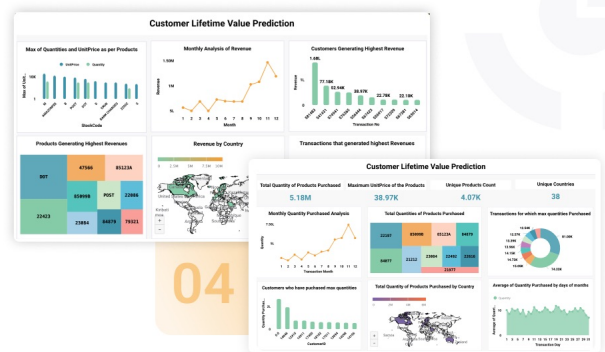
Comprehensive Data Operations, encompassing Metadata Management

Model Studio



Modelling, encompassing the selection and configuration of models

Visualisation

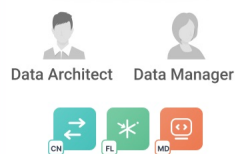


Viz Ops, Illustrating The Core Trends And Graphical Representations

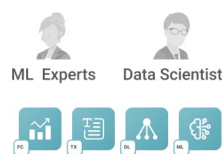
Agile Data Science

Encapsulating **best practices**, tools and **methods**

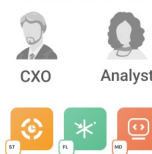
Data Ops



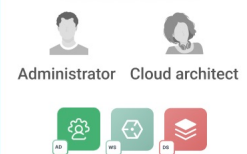
ML Ops



Viz Ops



Tech Ops



Ideate

- What is the **goal**?
- How can you leverage the **data**?
- What do you want to **predict**?

Acquire

- How is data **sampled**?
- Which data is **relevant**?
- Any data **privacy** issue?

Explore

- Plot the **data**
- Are there **anomalies**?
- Are there **patterns**?

Model

- Build** a model
- Fit** the model
- Validate** the model

Present

- What did we **learn**?
- Do the results make **sense**?
- Can we tell a **story**?

Deploy

- Where to **Deploy**?
- What is the **Structure** of Pipeline?
- How to **Optimise** and **Scale**?