

# 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.

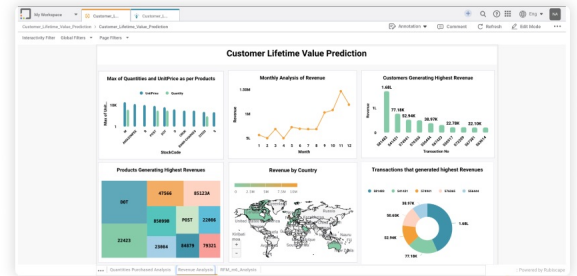
## Technique

- 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



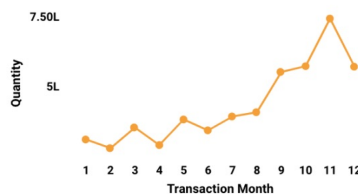
## Value Points

Understand the what, why, when, where & how

### Exploratory Analysis

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

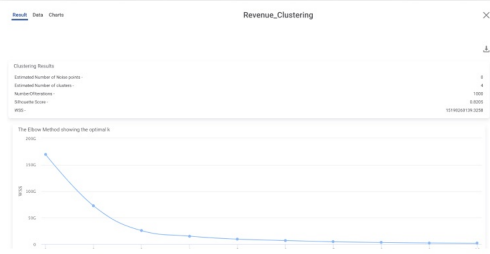
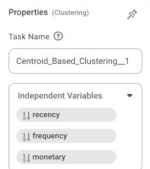
Monthly Quantity Purchased Analysis



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.

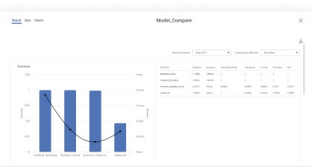
### Clustering using RFM analysis



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

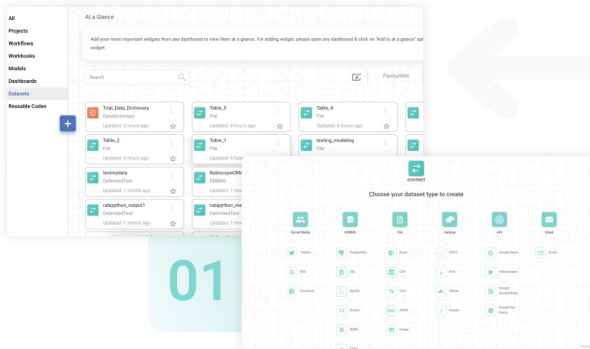
By identifying high-CLV customers, businesses can focus their marketing efforts, customer service, and retention programs on segments offering the greatest long-term value.

# Multi Persona DSML Platform

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



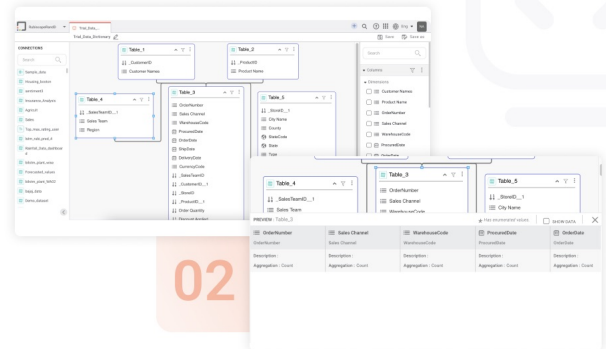
## Data Connect



01

Data Source: Customer Lifetime Value Prediction

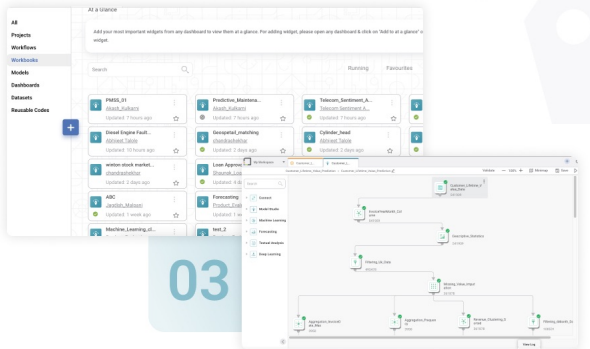
## Metadata Manger



02

Comprehensive Data Operations, encompassing Metadata Management

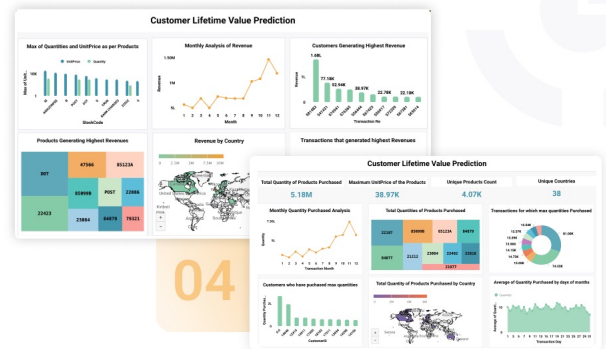
## Model Studio



03

Modelling, encompassing the selection and configuration of models

## Visualisation



04

Viz Ops, Illustrating The Core Trends And Graphical Representations

# Agile Data Science

Encapsulating best practices, tools and methods

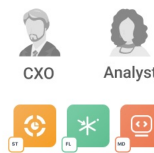
### Data Ops



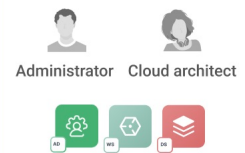
### ML Ops



### 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?