

# FMCG Forecasting

Function : #Forecasting | Industry : #FMCG

## Goal

- Forecasting and Demand Planning: To predict product demand and manage inventory to avoid stock-outs.
- Profitability Maximisation: To maximise profits by analysing sales channels and products, and allocating resources to high-profit areas for revenue growth.

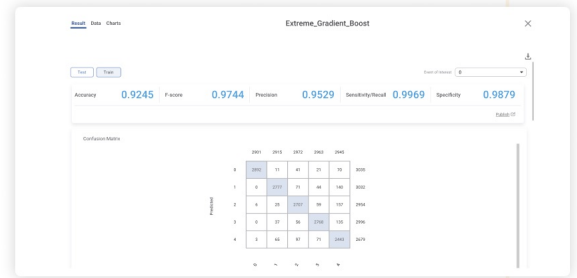
## Technique

- Statistical Analysis
- Data Modelling
- Time Series Forecasting
- Visualization

## Impact

- Optimised inventory management and supply chain corresponding to economic and market factors.
- Improved customer satisfaction and loyalty through consistent quality and availability of the products across different regions

## Result

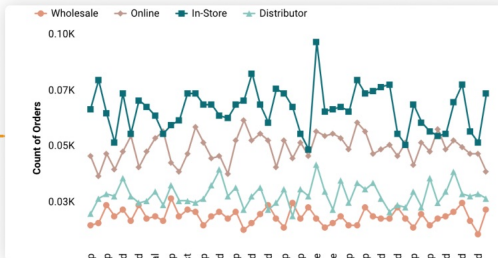


## Value Points

Understand the what, why, when, where & how

### Exploratory Analysis

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

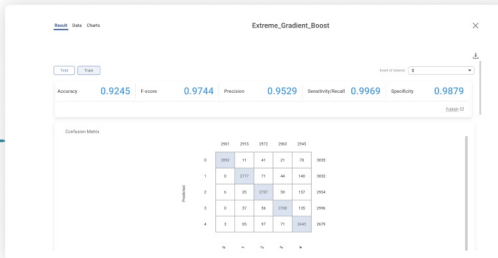


Identify patterns and generate insights to summarise the main characteristics

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

### Classification

- Machine Learning
  - k Nearest Neighbor
- Classification
  - Forecasting
  - Textual Analysis
- Regression
  - Deep Learning

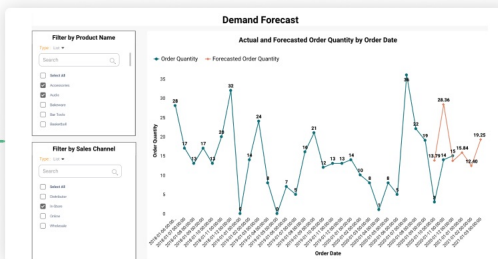


Applied multiple classification algorithms and then based on accuracy metric, best fit is identified

Classification obtained through profit percentage has the potential to optimise supply chain operations, improve inventory management, and enhance marketing strategies.

### Forecasting

- Descriptive\_Statistics
- Outlier\_Detection
- Forecast\_LSTM
- Forecast\_Template



Forecasting order quantity as per different sales channel for next months using Auto-ARIMA, LSTM, etc.

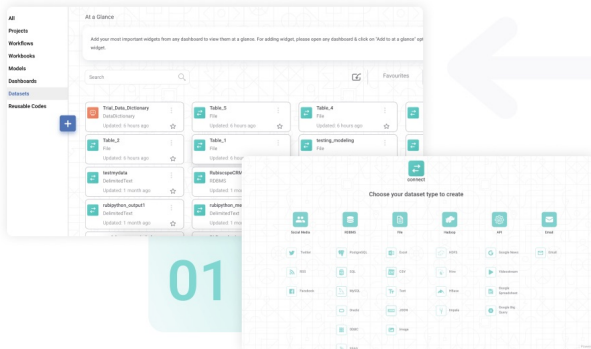
Forecasting and demand planning in FMCG industry contribute to increased sales and market share and improve inventory management.

# Multi Persona DSML Platform

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



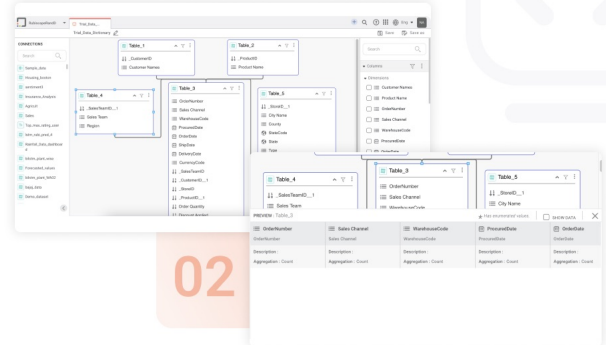
## Data Connect



01

Data Source: Sales Data

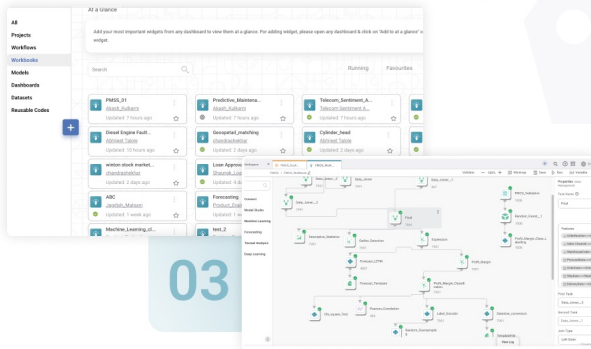
## Metadata Manger



02

Comprehensive Data Operations, encompassing Metadata Management

## Model Studio



03

Modeling, encompassing the selection and configuration of models

## Visualisation



04

Viz Ops, Illustrating The Core Trends And Graphical Representations

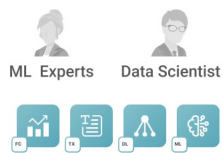
## Agile Data Science

Encapsulating best practices, tools and methods

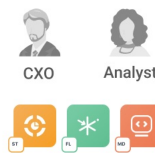
### Data Ops



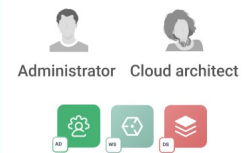
### ML Ops



### 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**?