

ATM Transactions Analysis

Function : #Operations | Industry : #Finance

Goal

- To forecast accurate transaction volume and ATM network, enabling effective cash flow.
- To identify suspicious patterns in ATM transactions,
- To enhance security measures and safeguarding against potential fraudulent activities.

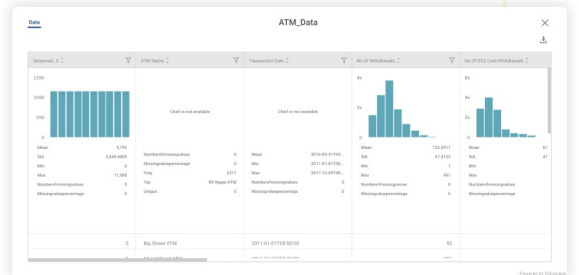
Technique

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

Impact

- Proper planning of cash flows, and better liquidity optimisation.
- Improved risk management.
- Customer satisfaction.

Result



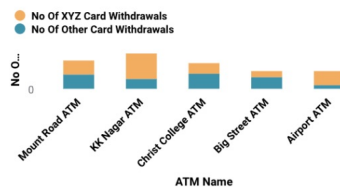
Value Points

Understand the what, why, when, where & how

Exploratory Analysis

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

Number of Withdrawals by Card Type for Each ATM



Identify patterns and generate insights to summarise the main characteristics

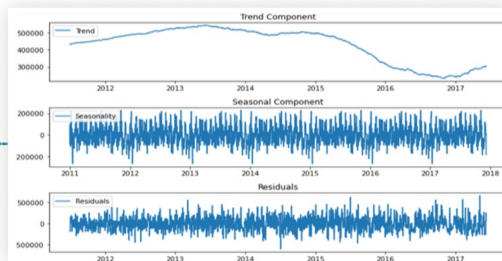
Exploratory data analysis enables business owners to derive meaningful insights, patterns and better data-driven decisions as opposed to intuitive ones.

Decomposition Analysis

Forecasting

Data Exploration

- Data Preparation
- Modeling



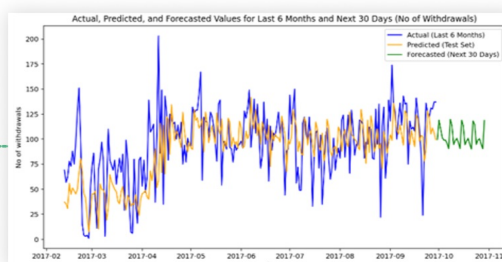
Decomposition methods to identify trends and seasonal patterns

Decomposition analysis helps to derive trends, seasonal patterns identifying relative peaks for further forecasting models.

Forecasting

Forecasting

- Auto ARIMA
- Automated Exponential Smoothing
- Holt Exponential Smoothing
- ARIMA



Forecasting volume for ATM networks using Auto-ARIMA, LSTM, etc.

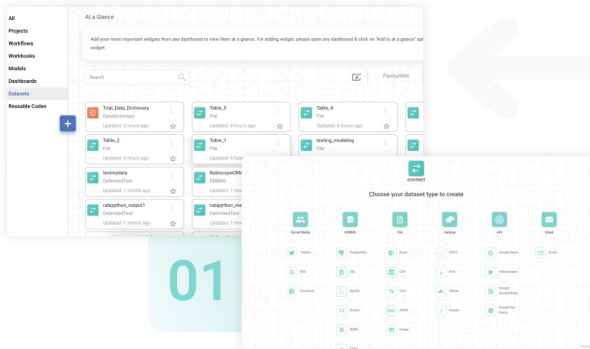
Forecasting insights assists to derive more accurate no of withdrawals, improved risk management, and better liquidity optimisation.

Multi Persona DSML Platform

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



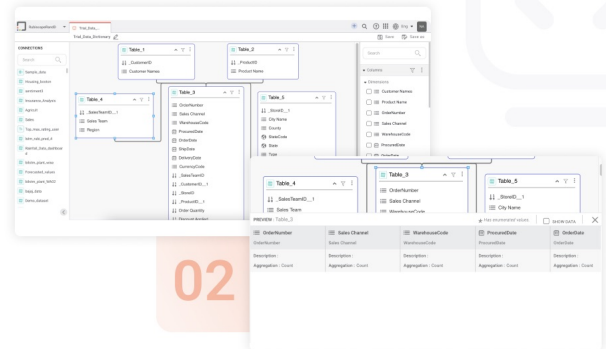
Data Connect



01

Data Source: ATM Transaction Data

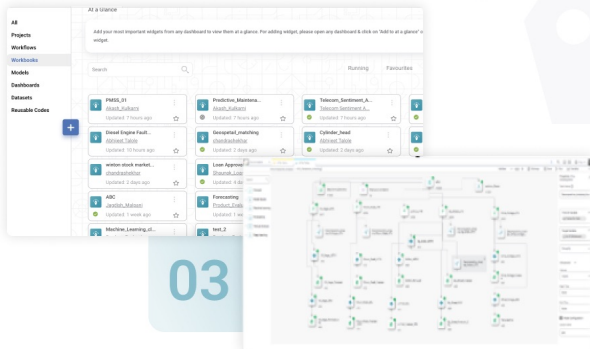
Metadata Manger



02

Comprehensive Data Operations, encompassing Metadata Management

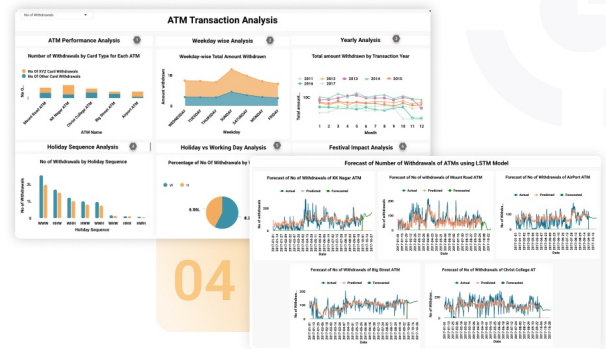
Model Studio



03

Modelling, encompassing the selection and configuration of models

Visualisation



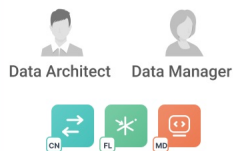
04

Viz Ops, Illustrating The Core Trends And Graphical Representations

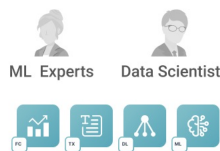
Agile Data Science

Encapsulating best practices, tools and methods

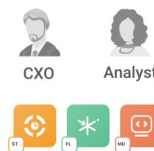
Data Ops



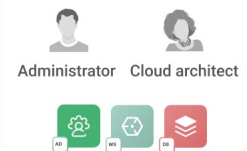
ML Ops



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**?