

June 2025

# Portfolio.

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Hamza Khalid

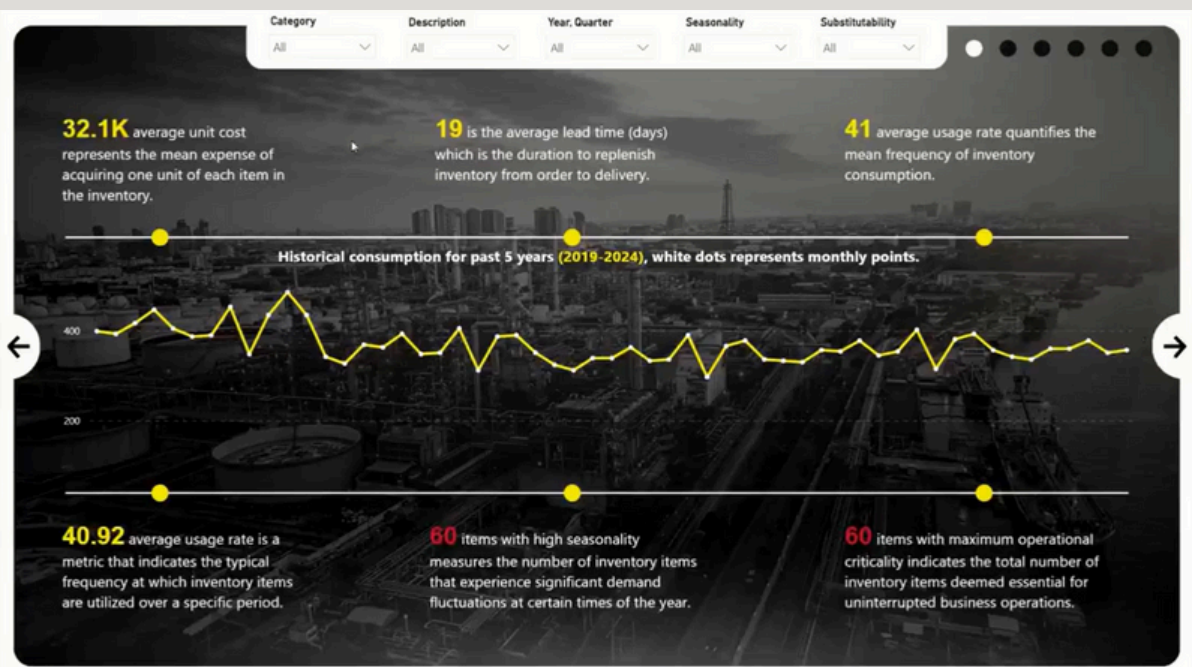
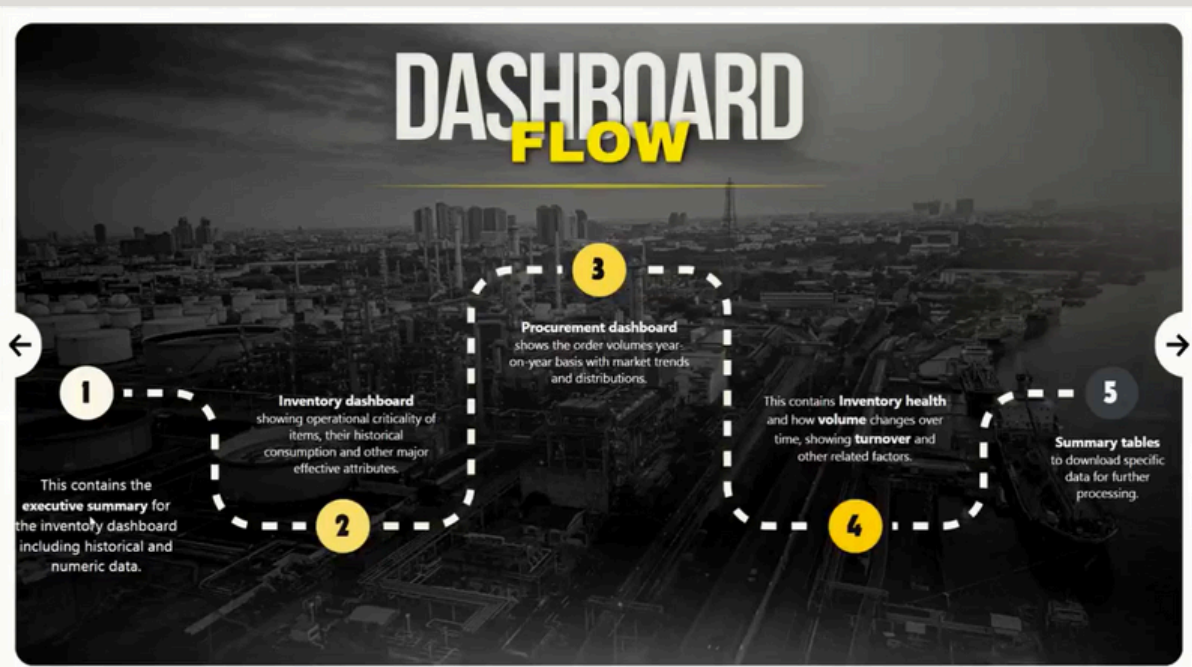
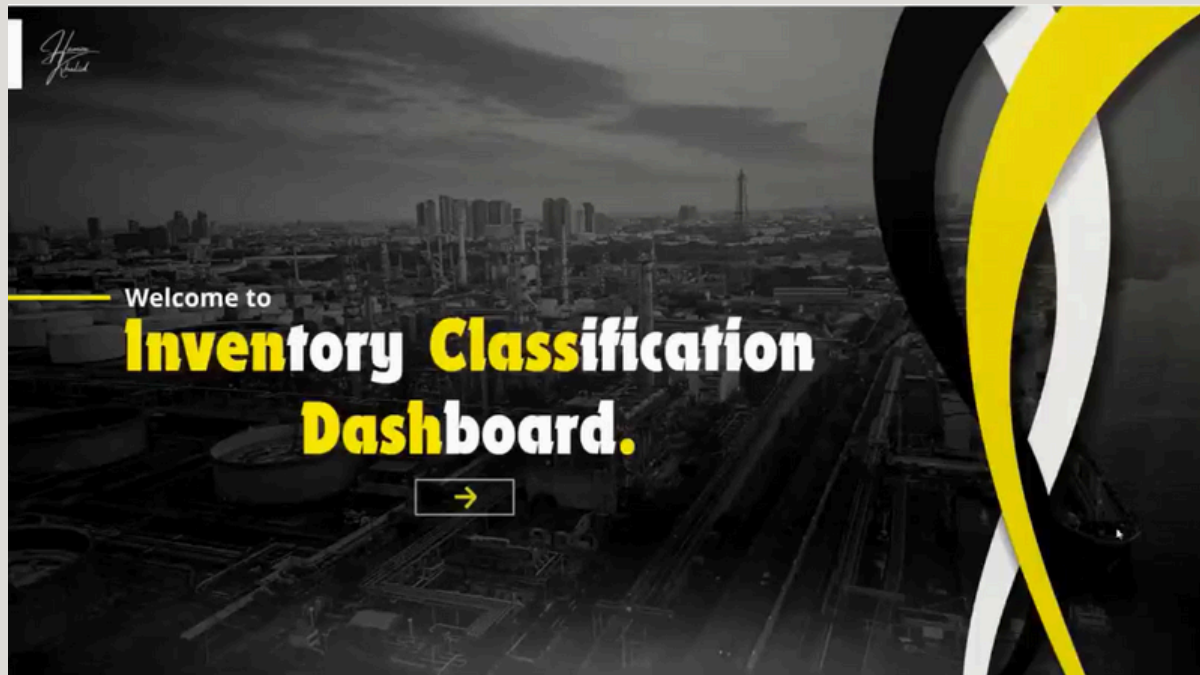
Dashboards & Reports

# Introductory Note.

Due to data integrity and confidentiality constraints, I am unable to showcase my client work. However, to demonstrate my expertise, I have developed a portfolio of dashboards. Additionally I've worked on analytics and dashboarding on:

- **Operational Performance Monitoring** – Identifying inefficiencies and optimizing operations.
- **Anomaly Detection & Fraud Prevention** – Developing real-time dashboards to detect irregularities in the readings, and the operational data.
- **Consumption Analysis** – Understanding usage patterns to drive customer engagement and operational efficiency.
- **Process Optimization & Efficiency Tracking** – Creating tools to measure and boost operational effectiveness.
- **Financial & Risk Analytics** – Identifying risks, tracking loss, and optimizing revenue protection strategies.
- **Real-time Insights & Reporting** – Building interactive dashboards for dynamic business decision-making.
- **Stakeholder Communication & Data Storytelling** – Presenting complex findings in an engaging and actionable manner.
- **Predictive Modelling & Forecasting** – Using machine learning to predict demand and detect inefficiencies.
- **Technology & Innovation Initiatives** – Exploring new data concepts and tools to future-proof the operations.

These dashboards highlight my ability to analyse large datasets, create impactful visualizations, and generate actionable insights for better strategies and decision making for the teams and stakeholders.



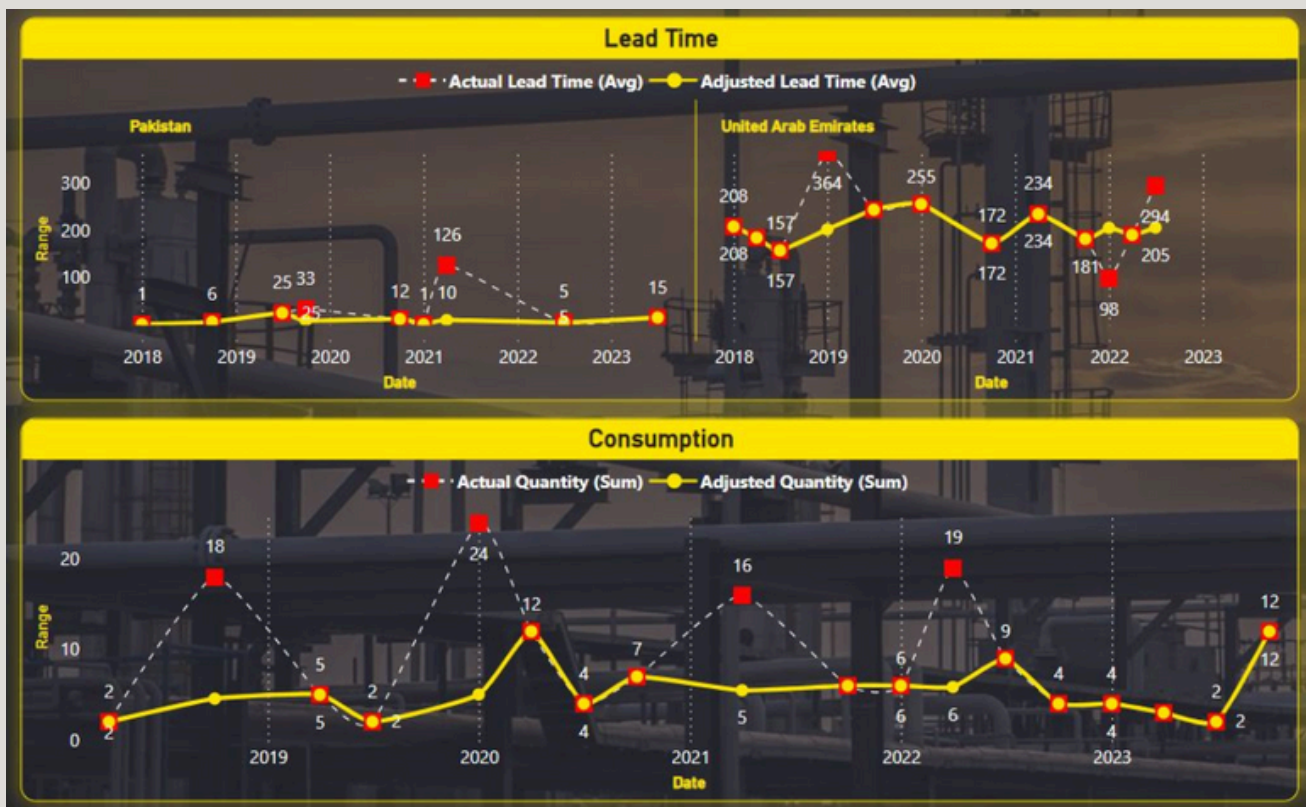
# INVENTORY CLASSIFICATION. 02





## PREDICTIVE MODELLING

This **dashboard** showcases inventory optimization, where I have applied **predictive modelling** to detect and adjust **anomalies**. By optimizing stock levels and aligning them with **safety thresholds**, this approach enhances operational efficiency, reduces excess inventory, and ensures a more streamlined and cost effective supply-chain ultimately improving business performance and decision-making.



# TRANSACTIONAL REPORTING

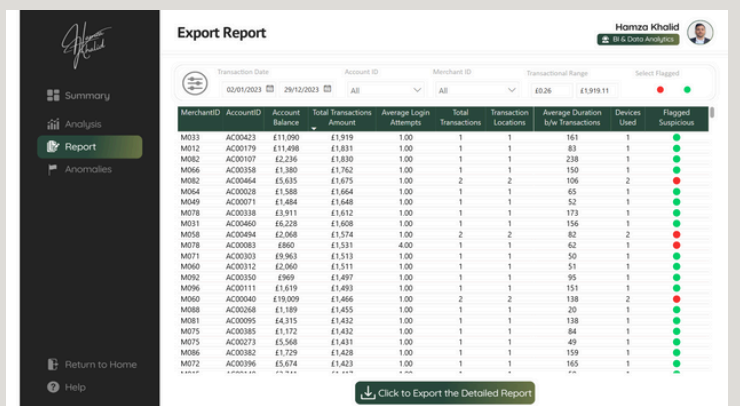
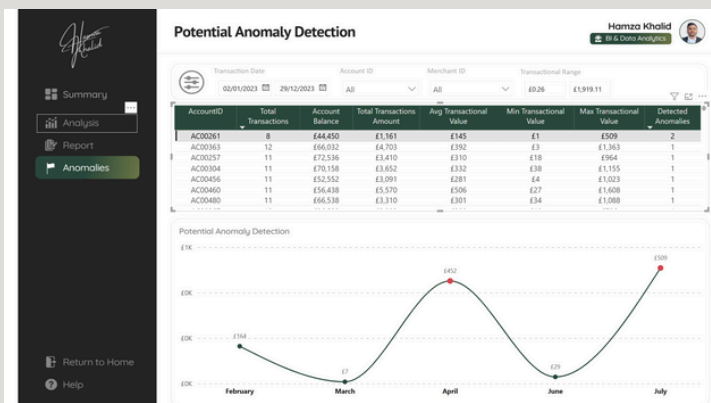
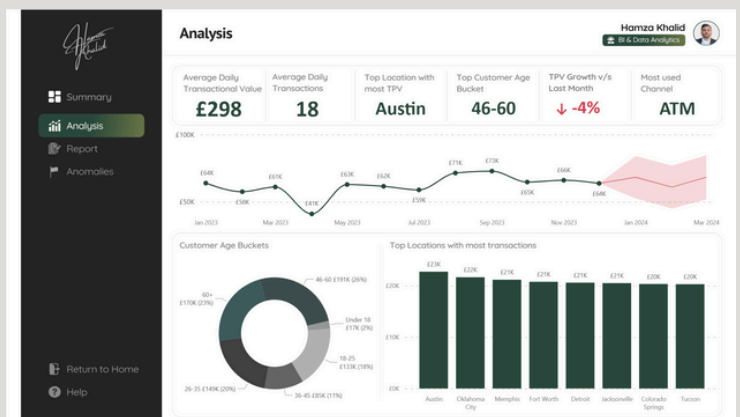
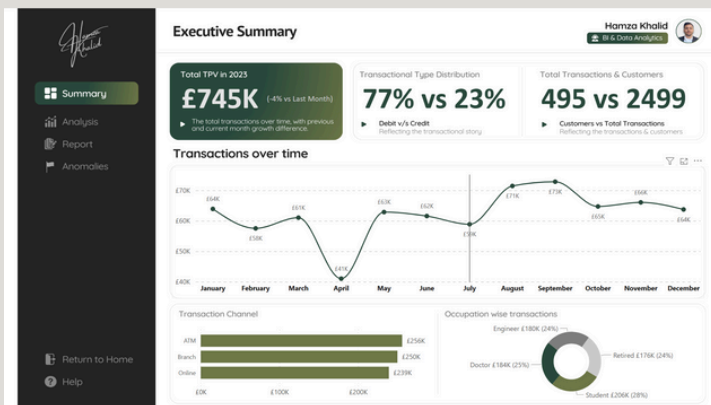
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# Transactional Reporting



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# PERFORMANCE ANALYSIS

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## Merchant Performance & Cohort Analysis

Click to Proceed

**Glossary/Brief Explanation**  
This page acts as a user guide to the document's structure, making it easier for readers to navigate and understand.

**Analysis 01**

**TOTAL TRANSACTIONAL VALUE:** The Total Transactional Value KPI represents the sum of transactions in the data. It is visualized using a quarter-level line chart, accompanied by a trend line that highlights a decreasing trend in transactional value from last year to 2021.

**TOTAL NUMBER OF TRANSACTIONS:** This KPI represents the distinct count of transaction IDs in the data and also shows the top 3 merchants with most transactions in past 2 years.

**TIME WITH US - MERCHANT TENURE ANALYSIS:** This shows the time between the first transaction of each merchant and the current date. Then, visually represent how long each merchant has been with the company in a user-friendly way.

**MONTH-TO-DATE (MTD) - TRANSACTION ANALYSIS INCLUDING QUARTER-LEVEL ANALYSIS:** This section shows a comparison of Month-to-Date (MTD) transactions for the current and previous month, with analysis at the quarter level on both the right and left sides. The visualization will also include a Quarterly Analysis, highlighting the percentage changes compared to the previous quarter.

**MERCHANT COHORT PERFORMANCE OVER TIME:** This section shows how to create a new field that categorizes merchant IDs based on their registration month, forming cohorts. Then, build a visualization to display the transaction amount over time, segmented by cohorts.

Use a parameter to switch between:  
A. A detailed view, showing each cohort separately.  
B. An overall view, displaying the total transaction amount for all merchants combined.

**Analysis 02**

**MERCHANTS WITH LOYALTY:** This KPI displays the number of merchants who have loyalty with the company, along with the different account types of those merchants, such as debit, credit and more.

**COUNTRY ANALYSIS:** This analysis displays the total transactional value for each country, allowing for a comparison of transactions across different regions for expansion strategies etc.

**TRANSACTIONAL TREND:** Showing monthly trend of transactions and a forecast line showing for 2022 as predicted transactions.

**MERCHANT ACTIVITY ANALYSIS:** I tried to add some analysis for suspicious activity detection. This shows transactional trends for merchants, total transactions by each merchant and their averages, also I added median, upper and lower quartiles to detect whether any merchant has done an unusual transaction which is more than 2x or 3x of its average.

**Analysis 01**  
This page displays all tasks listed in the Tableau section with a user-friendly layout, also some KPIs like total transactional value, number of transactions, top 3 merchants with most transactions and quarter-level analysis.

**TOTAL TRANSACTIONAL VALUE**  
Showing total transactions recorded in the data.  
**2.4B**

**TOTAL NUMBER OF TRANSACTIONS**  
Showing no. of transactions & top 3 merchants.  
**263K**

**MERCHANT COHORT PERFORMANCE OVER TIME**  
Switch between cohort-specific details and a comprehensive overview of all transactions.  
Detailed View

**TIME WITH US - MERCHANT TENURE ANALYSIS**  
Analyze merchant tenure, from their first transaction to the present.

**MONTH-TO-DATE (MTD) - TRANSACTION ANALYSIS**  
Comparison of Current and Previous Month-to-Date Transactions on the right and left side covering up Quarter level analysis.

Current MTD: 03/12/2021  
MTD % Difference: 68%

Previous MTD: 1.9M  
Current MTD: 3.2M

**Analysis 02**  
A comprehensive view of merchant activity analysis like the averages and quartiles to view any suspicious transactions, total transaction analysis and forecasting, merchants with loyalty, and country-specific performance.

**MERCHANTS WITH LOYALTY**  
Showing total merchants who have the loyalty and their account types.  
**7**

	Null	Credit	Debit	Unknown
	0.1B	0.2B	0.4B	0.7B

**COUNTRY ANALYSIS**  
Showing total transactions recorded for each country.

Country	Transactions
GBR	0.07B
HUN	1.53B
ISL	0.35B
PRT	0.50B

**TRANSACTIONAL TREND**  
Analyze the total transactions and provide a forecast up to the year 2022.

Total number of transactions: 263K

Predicted Transactions

**MERCHANT ACTIVITY ANALYSIS**  
Transaction Averages, Trends, and Suspicious Pattern Detection.

New Merchant Id: 456

New Merchant Id	AVG Transaction	Total Transactions C.
188	54,953	16,086
10	15,954	12,425
11	14,049	13,173
56	13,590	11,106
103	12,419	13,528
20	11,486	17,951
75	6,841	22,239
17	6,121	15,833
165	6,110	14,847
4	5,247	17,000