

Company: TATA - Job Sim via Forage

Title: Tata Data Visualization: Empowering Business with Effective Insights.

Date Completed: August, 2025

Duration: 2 Weeks

Tools Used: Excel, Power Query, Power BI

Overview

This project was part of the TATA Power BI Data Visualization Virtual Internship on Forage. The objective was to help an online retail client understand sales performance across countries in order to identify potential emerging high growth markets. As a data analyst, my role was to clean and analyze the provided dataset, build a comprehensive report and an interactive Power BI dashboard, and then present key insights to improve decision-making.

Dataset

A CSV file of TATA Online Retail's transactional data was provided and downloaded from forage website. The dataset contained 13 months (December 2010 – December 2011) of sales transactions, covering 541909 records and 8 columns, including invoice number, invoice date, stock code, unit price, quantity, customer ID and country.

Tools & Skills Used

Tools: Microsoft Excel, Power Query, Power BI

Skills: Data cleaning, Data Modeling, DAX, EDA, Data Visualization, Storytelling

Process and Approach

- Imported raw data from Microsoft Excel into Power BI.
- Used Power Query to clean raw dataset by removing duplicates, handling missing values, and correcting inconsistencies; and then transformed and filtered the data.
- Created calculated tables, columns and measures (e.g. RMF Averages, %Orders etc.).
- Performed exploratory data analysis (EDA) to detect patterns, anomalies, and seasonal trends.
- Created visuals to explore, analyze hidden patterns and communicate insights in the data.
- Designed interactive dashboard visuals for easy interpretation.
- Prepared an executive summary for stakeholders.

Insights & Findings

- The months January and May showed consistent significant growth of revenue with May having the most drastic revenue growth. Whereas, April and December showed consistent significant loss of revenue with December having the most drastic drop in revenue due to close downs for holidays. This pattern is global. However, TATA Online Retail depends on only 4 customers for 41% of total revenue generated outside the UK.

- EIRE and Netherlands returned the highest revenue and demands for products because the few customers there are basically bulk buyers. However, Germany and France had more consistent revenue and orders trends because they each had close to 48% of the total customers.
- TATA Online Retails top customers by RMF segmentation are from Germany and France. Also, the two countries showed strong customer loyalty and commitments with over 75% reorder rate each.
- Germany and France showed consistent growth, suggesting expansion opportunities.

Recommendation

- Consider Germany and France for possible expansions.
- Focus on EIRE and Netherlands for targeted marketing efforts

Skills

- Data Cleaning and transformation
- Data modeling and Analysis
- Data Visualization and Interpretation
- Presentation & Insights
- Charts & Graphs
- Dashboard
- Effective Communication

Links & Artifacts

- **Dashboard:** [Link to Power BI Service/Tableau Public]
- **GitHub Repo:** <https://github.com/GrandMEAN-RA/Power-BI-Projects/blob/4c15433b1db1780f912c479cc956421051b157ea/TATA%20Online%20Retail.pbix>
- **Certificate:** https://forage-uploads-prod.s3.amazonaws.com/completion-certificates/ifobHAoMjQs9s6bKS/MyXvBcppsW2FkNYCX_ifobHAoMjQs9s6bKS_7YyoaLBb4euDQYJuD_1754487976371_completion_certificate.pdf
- **Case Study PDF:** [Link to PDF or Google Drive]

Reflection

This project strengthened my ability to transform raw data into actionable insights and enhanced my DAX skills in Power BI significantly. More so, I learnt so much about data modeling and market segmentation using Recency, Frequency and Monetary (RFM) factors. I also practiced presenting findings concisely for a non-technical audience, a crucial skill for client-facing roles.