

# Tailwind Traders - Microsoft Power BI Capstone Project

## Overview

This capstone project was part of the Microsoft Power BI Professional Certificate. It demonstrates the use of Excel, Power Query, DAX, and Power BI Service to build a complete business intelligence solution for Tailwind Traders.

### 1. Excel Data Preparation

- Added columns for Gross Revenue, Total Tax, and Net Revenue using formulas.
- Verified values across top records to ensure proper tax and sales calculations.

### 2. Data Source Configuration in Power BI

- Loaded multiple Excel files: Sales, Purchases, Countries.
- Ensured column data types were accurate (e.g., Date, Decimal, Whole Number).
- Used Python script in Power BI to load currency exchange data.

### 3. Data Model Design

- Created relationships: 1:1 (Countries-Exchange), \*:1 (Sales-Countries), \*:1 (Calendar-Purchases).
- Built a Calendar table using DAX for time-based reporting.
- Created a 'Sales in USD' calculated table using RELATED and ADDCOLUMNS.

### 4. DAX Aggregations and Analysis

- Calculated Yearly Profit Margin, Quarterly Profit, YTD Profit.
- Used MEDIAN, DATESQTD, and TOTALYTD functions.
- Created performance-optimized visuals using the Performance Analyzer.

### 5. Report Building

- Developed visual reports: bar, column, line, area, pie, KPI, and cards.
- Created Sales Overview and Profit Overview tabs.
- Enabled slicing by country and time.
- Used trendlines, formatting, and dynamic labels.

### 6. Executive Dashboard and Mobile View

- Pinned key visuals and cards to a mobile-optimized dashboard.

- Configured layout: sales visuals (top), profit visuals (bottom), KPI (centered).
- Enabled mobile view and accessibility.

## **7. Alerts and Subscriptions**

- Configured alert for Gross Revenue below \$400.
- Set up weekly subscriptions for Sales and Profit reports.
- Ensured stakeholders received automated updates with links and previews.

## **Conclusion**

This project demonstrates end-to-end BI skills including ETL, modeling, DAX, visualization, and publishing in Power BI Service. The solution helps Tailwind Traders gain insights into sales, profits, and performance metrics across geographies and time.