

Project Overview

This project showcases a complete end-to-end analytics workflow built using Azure SQL Database and Microsoft Power BI. The goal was to transform raw retail transaction data into a clean, interactive, and executive-ready dashboard using best practices in data modeling, DAX, and visualization design.

Objectives

- Build a scalable cloud-based data model
- Implement a star schema for analytics
- Create DAX measures for revenue and performance metrics
- Develop interactive visuals for product, customer, and country insights
- Publish and share a professional dashboard

Architecture & Tools

- **Azure SQL Database** – Cloud data storage
- **Power BI Desktop** – Data modeling, DAX, visualization
- **Star Schema** – Fact + Dimension tables
- **DAX** – Custom measures
- **Parallels Desktop + Windows 11** – Power BI Desktop on Mac

Data Model (Star Schema)

fact_Sales

- Quantity
- UnitPrice
- InvoiceDate
- StockCode
- CustomerID

dim_Product

- StockCode
- Description

dim_Customer

- CustomerID
- Country

dim_Date

- InvoiceDate
- Year, Month, Day

Relationships:

- fact_Sales → dim_Product (StockCode)
- fact_Sales → dim_Customer (CustomerID)
- fact_Sales → dim_Date (InvoiceDate)

Key DAX Measures

Revenue

Code

```
Revenue = SUMX('fact Sales', 'fact Sales'[Quantity] * 'fact Sales'[UnitPrice])
```

Dashboard Features

KPIs

- Total Revenue
- Total Customers
- Total Orders

Visuals

- Revenue by Country
- Top 10 Products
- Top 10 Customers
- Monthly Revenue Trend
- Revenue Distribution (Pie/Donut)
- Date Slicer

Design Enhancements

- Professional theme
- Consistent color palette
- Currency formatting
- Clean layout and alignment

Publishing Workflow

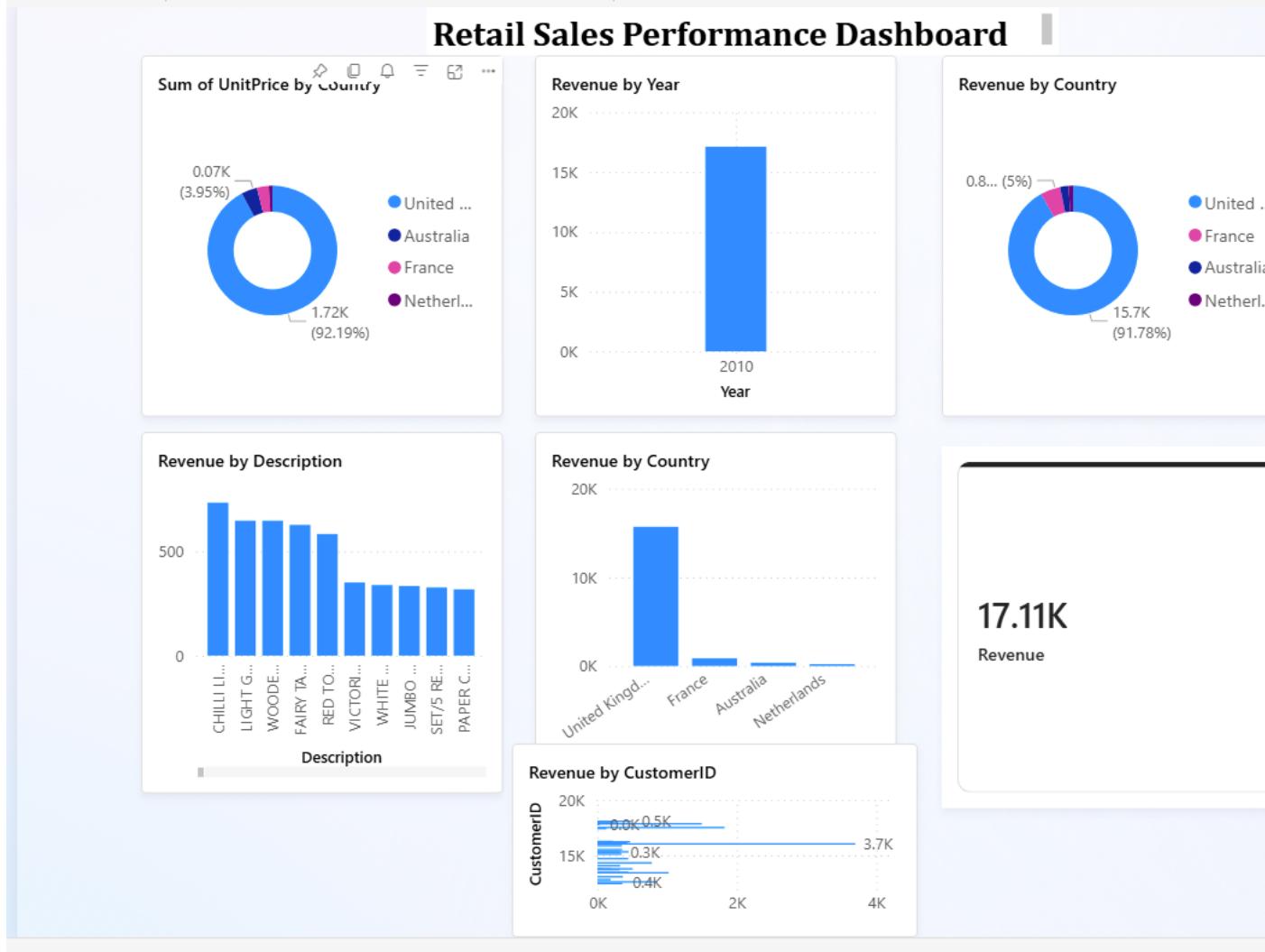
1. Built in Power BI Desktop
2. Published to Power BI Service
3. Shared via workspace
4. Exported visuals for portfolio and LinkedIn

Key Learnings

- Importance of star schema for analytics

- Writing efficient DAX measures
- Cloud + BI integration
- Visual storytelling and dashboard design

Screenshots



Contact

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