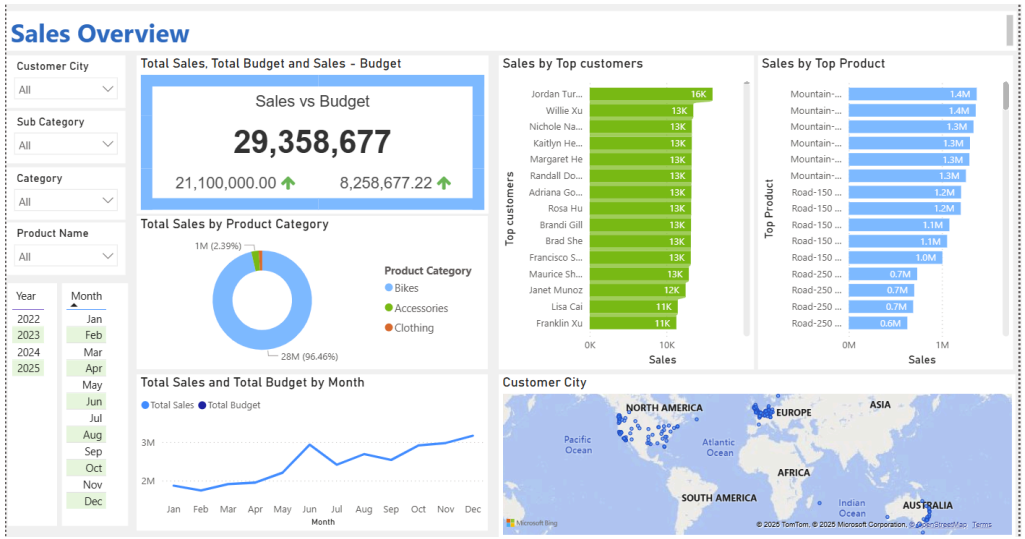
Test Portfolio Walkthrough

- Portfolio -

Data Analyst Project – Sales Management

(https://www.linkedin.com/in/yura-batsukh)

This project uses the publicly available AdventureWorks sample dataset (https://learn.microsoft.com/en-us/sql/samples/adventureworks-install-configure?view=sql-server-ver15&tabs=ssms) from Microsoft, updated to reflect 2025 data. The goal was to simulate the work of a Sales Analyst by performing data cleaning with SQL and building an interactive dashboard using Power BI.



InternetSalesquery...9 (YURA\equg8 (53))* | SQLQuery1.sql - lo...(YURA\equg8 (62))

```sql
SELECT
[ProductKey],
[OrderDateKey],
[DueDateKey],
[ShipDateKey],
[CustomerKey],
[SalesOrderNumber],
[SalesAmount]
From [dbo].[FactInternetSales]
WHere Left (orderdatekey, 4) >= YEAR(GETDATE()) -5
Order By OrderDateKey ASC
```

100 %

Results | Messages

	ProductKey	OrderDateKey	DueDateKey	ShipDateKey	CustomerKey	SalesOrderNumber	SalesAmount
1	310	20211229	20220110	20220105	21768	SO43697	3578.27
2	346	20211229	20220110	20220105	28389	SO43698	3399.99
3	346	20211229	20220110	20220105	25863	SO43699	3399.99
4	336	20211229	20220110	20220105	14501	SO43700	699.0982
5	346	20211229	20220110	20220105	11003	SO43701	3399.99
6	311	20211230	20220111	20220106	27645	SO43702	3578.27
7	310	20211230	20220111	20220106	16624	SO43703	3578.27
8	351	20211230	20220111	20220106	11005	SO43704	3374.99
9	344	20211230	20220111	20220106	11011	SO43705	3399.99
10	312	20211231	20220112	20220107	27621	SO43706	3578.27
11	312	20211231	20220112	20220107	27616	SO43707	3578.27
12	330	20211231	20220112	20220107	20042	SO43708	699.0982
13	313	20211231	20220112	20220107	16351	SO43709	3578.27
14	314	20211231	20220112	20220107	16517	SO43710	3578.27

DimProductquery.s...(YURA\equg8 (56))* | InternetSalesquery...9 (YURA\equg8 (53))* | SQLQuery1.sql - lo...(YURA\equg8 (62))

```sql
--Cleaned Dim_Product Table--
SELECT
p.[ProductKey],
p.[ProductAlternateKey] AS ProductItemCode,
p.[EnglishProductName] AS [Product Name],
ps.EnglishProductSubcategoryName AS [Sub Category],
pc.EnglishProductCategoryName AS [Product Category],
p.[Color] AS [Product Color],
      --,[SafetyStockLevel]
      --,[ReorderPoint]
      --,[ListPrice]
p.[Size] AS [Product Size],
      --,[SizeRange]
      --,[Weight]
      --,[DaysToManufacture]
p.[ProductLine] AS [Product Line],
      --,[DealerPrice]
      --,[Class]
      --,[Style]
p.[ModelName] AS [Product Model Name],
      --,[LargePhoto]
p.[EnglishDescription] AS [Product Description],
      ---below, replacing NULL data with OUTDATED--
ISNULL (p.Status, 'Outdated') AS [Product Status]
  FROM [dbo].[DimProduct] as p
  left join dbo.DimProductSubcategory as ps on ps.ProductSubcategoryKey = p.ProductSubcategoryKey
  left join dbo.DimProductCategory as pc on ps.ProductCategoryKey = pc.ProductCategoryKey
  order by
  p.ProductKey asc
```

Business Request & User Stories

This dashboard was created in response to a request from the Sales Manager, to replace static sales reports with a dynamic Power BI dashboard. The goal was to better visualize product sales by customer, track performance over time, and compare actual sales against the 2025 budget.

The solution allows users to:

- Filter sales by product, customer, and salesperson
- View total sales and budget performance over the past 2 years
- Identify top-performing customers and products
- Drill down into customer-specific sales trends and order history

This dashboard supports both sales managers and individual sales representatives by providing an at-a-glance overview as well as detailed views for decision-making and follow-up.

#	**As a role**	**I want request/ demand**	**So that i (user value)**	**Acceptance criteria**
1.	Sales manager	Dashboard overview of internet sales	I can get follow better which customers product sales the best	A Power BI dashboard which updates data once a day
2.	Sales representative	A detailed overview of internet sales per customers	I can follow up my customers that buys the most and who we can sell ore to	A Power BI which allows filter data per each customer
3.	Sales representative	A detailed overview of internet sales per customers	I can follow up my customers that buys the most	A Power BI which allows filter data per each customer

Data Cleaning and Transformation using SQL

The raw sales data was cleaned and prepared using SQL. Key steps included removing duplicates, handling null values, standardizing date formats, and filtering incomplete transactions. Data from multiple sources, such as product, customer, and budget files, was joined to create a unified dataset. These preprocessing steps ensured that the data was accurate, consistent, and ready for use in Power BI.

DIM_Calendar

```
SELECT
[DateKey] ,
[FullDateAlternateKey] AS Date,
[EnglishDayNameOfWeek] AS Day,
[WeekNumberOfYear] AS WeekNr,
[EnglishMonthName] AS Month,
LEFT([EnglishMonthName], 3) AS MonthShort,
[MonthNumberOfYear] AS MonthNr,
[CalendarQuarter] AS Quarter,
[CalendarYear] AS Year
FROM
[AdventureWorksDW2019].[dbo].[DimDate]
Where
CalendarYear >= 2022
```

Dim_Customer

```
--Cleaned Customer table--
SELECT
c.customerkey AS CustomerKey,
      --[GeographyKey]
      --[CustomerAlternateKey]
      --[Title]
c.firstname AS [First Name],
      --[MiddleName]
c.lastname AS [Last Name],
c.firstname + ' ' + LastName AS [Full Name],
      --[NameStyle]
      --[BirthDate]
      --[MaritalStatus]
      --[Suffix]
CASE c.gender When 'M' then 'Male' WHen 'F' then 'Female' End AS Gender,

      --[EmailAddress]
      --[YearlyIncome]
      --[TotalChildren]
      --[NumberChildrenAtHome]
      --[EnglishEducation]
      --[SpanishEducation]
      --[FrenchEducation]
      --[EnglishOccupation]
      --[SpanishOccupation]
      --[FrenchOccupation]
      --[HouseOwnerFlag]
      --[NumberCarsOwned]
      --[AddressLine1]
      --[AddressLine2]
      --[Phone]
c.datefirstpurchase AS DateFirstPurchase,
      --[CommuteDistance]
g.city AS [Customer City]
From dbo.DimCustomer AS c
```

```
            Left join dbo.DimGeography AS g On g.GeographyKey = c.GeographyKey
  Order By
  CustomerKey Asc
```

DIM_Product

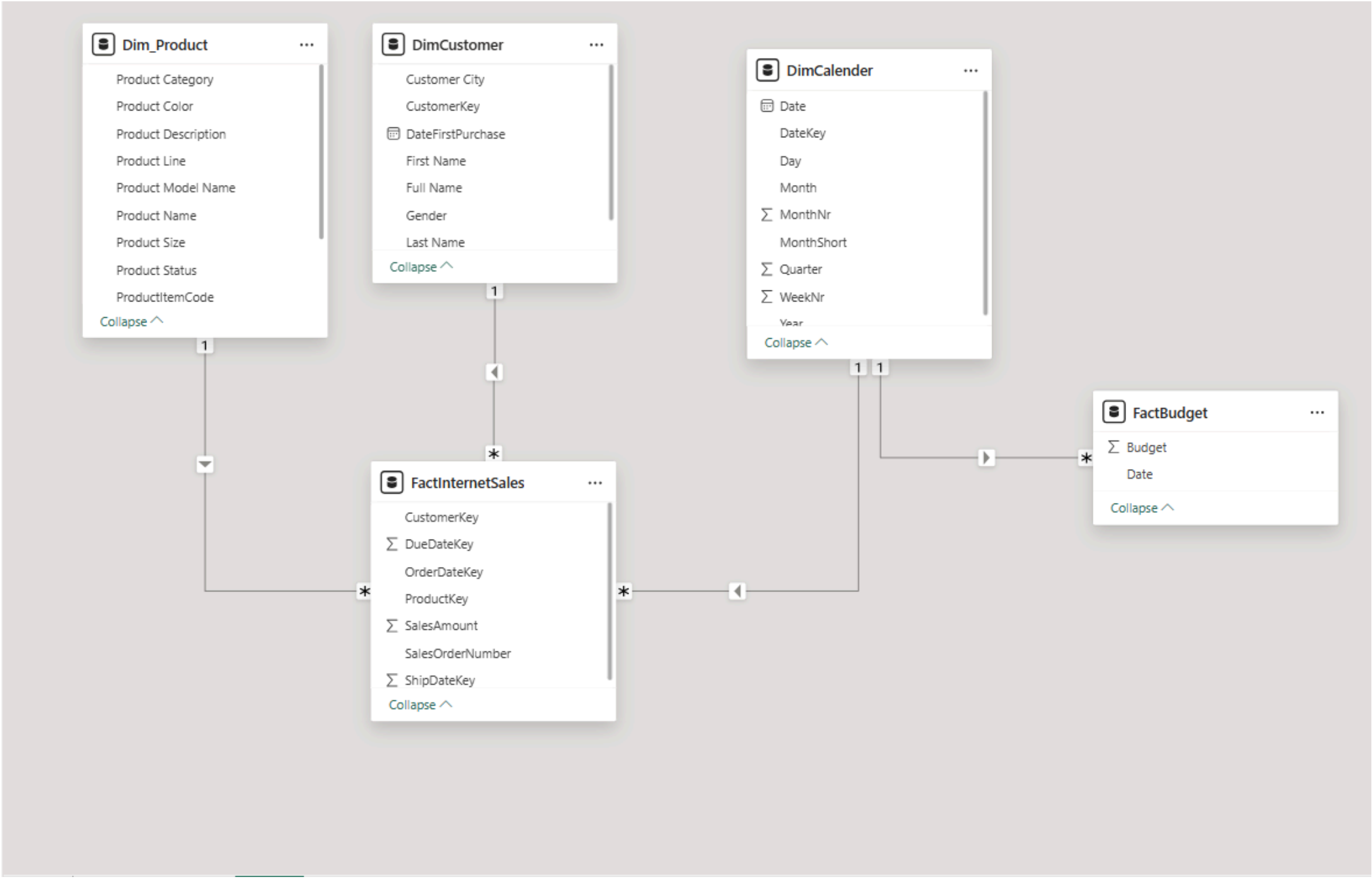
```
--Cleaned Dim_Product Table--
SELECT
p.[ProductKey],
p.[ProductAlternateKey] AS ProductItemCode,
p.[EnglishProductName] AS [Product Name],
ps.EnglishProductSubcategoryName AS [Sub Category],
pc.EnglishProductCategoryName AS [Product Category],
p.[Color] AS [Product Color],
      --[SafetyStockLevel]
      --[ReorderPoint]
      --[ListPrice]
p.[Size] AS [Product Size],
      --[SizeRange]
      --[Weight]
      --[DaysToManufacture]
p.[ProductLine] AS [Product Line],
      --[DealerPrice]
      --[Class]
      --[Style]
p.[ModelName] AS [Product Model Name],
      --[LargePhoto]
p.[EnglishDescription] AS [Product Description],
          ---below, replacing NULL data with OUTDATED--
ISNULL (p.Status, 'Outdated') AS [Product Status]
  FROM [dbo].[DimProduct] as p
  left join dbo.DimProductSubcategory as ps on ps.ProductSubcategoryKey = p.ProductSubcategoryKey
  left join dbo.DimProductCategory as pc on ps.ProductCategoryKey = pc.ProductCategoryKey
  order by
  p.ProductKey asc
```

DIM_InternetSales

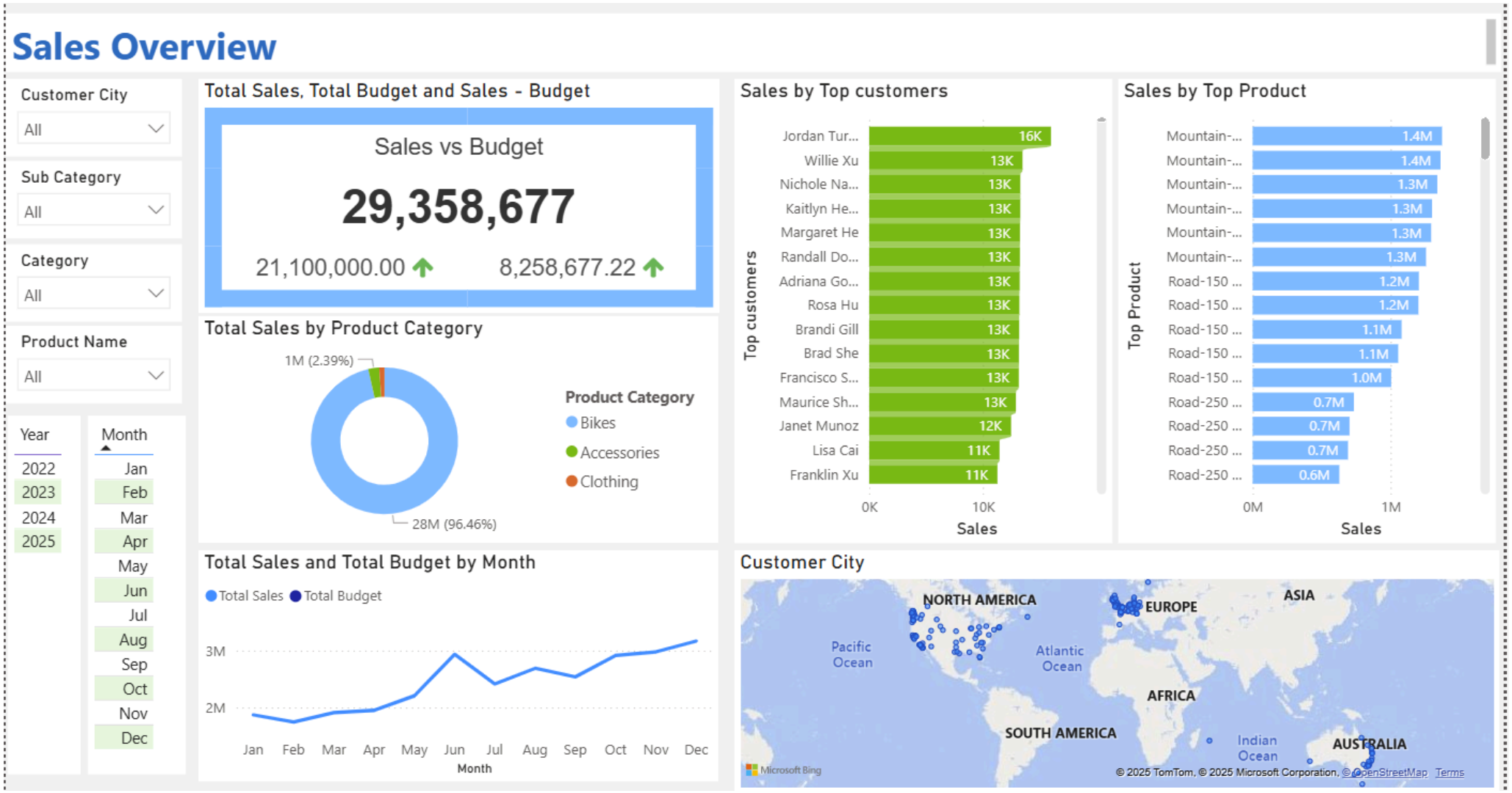
```
SELECT
[ProductKey],
[OrderDateKey],
[DueDateKey],
[ShipDateKey],
[CustomerKey],
[SalesOrderNumber],
[SalesAmount]
From [dbo].[FactInternetSales]
WHere Left (orderdatekey, 4) >= YEAR(GETDATE()) -5
Order By OrderDateKey ASC
```

Data Model

A star schema data model was built in Power BI by linking fact tables like Internet Sales and Budget with related dimension tables such as Product, Customer, and Calendar. Relationships were set up to ensure accurate filtering. Key measures were created using DAX to show total sales, budget comparisons, and sales by product or customer. This model allows easy filtering and clear insights across the dashboard.


Dim_Product
Product Category
Product Color
Product Description
Product Line
Product Model Name
Product Name
Product Size
Product Status
ProductItemCode
Collapse
DimCustomer
Customer City
CustomerKey
DateFirstPurchase
First Name
Full Name
Gender
Last Name
Collapse
DimCalender
Date
DateKey
Day
Month
MonthNr
MonthShort
Quarter
WeekNr
Year
Collapse
FactBudget
Budget
Date
Collapse
FactInternetSales
CustomerKey
DueDateKey
OrderDateKey
ProductKey
SalesAmount
SalesOrderNumber
ShipDateKey
Collapse
1
*

View the full dashboard by clicking the image below.



(https://app.powerbi.com/view?r=eyJrIjoiYWQ5ZmJmNzUtYjFhMy00ZDNhLWJlMGQtMmJlNmFiY2FkNmU5IiwidCI6IjJhYmJlOWVlLTM2ODAtNDA0Ny1iZTk2LThhMmVmZDIyMDc1NCJ9)