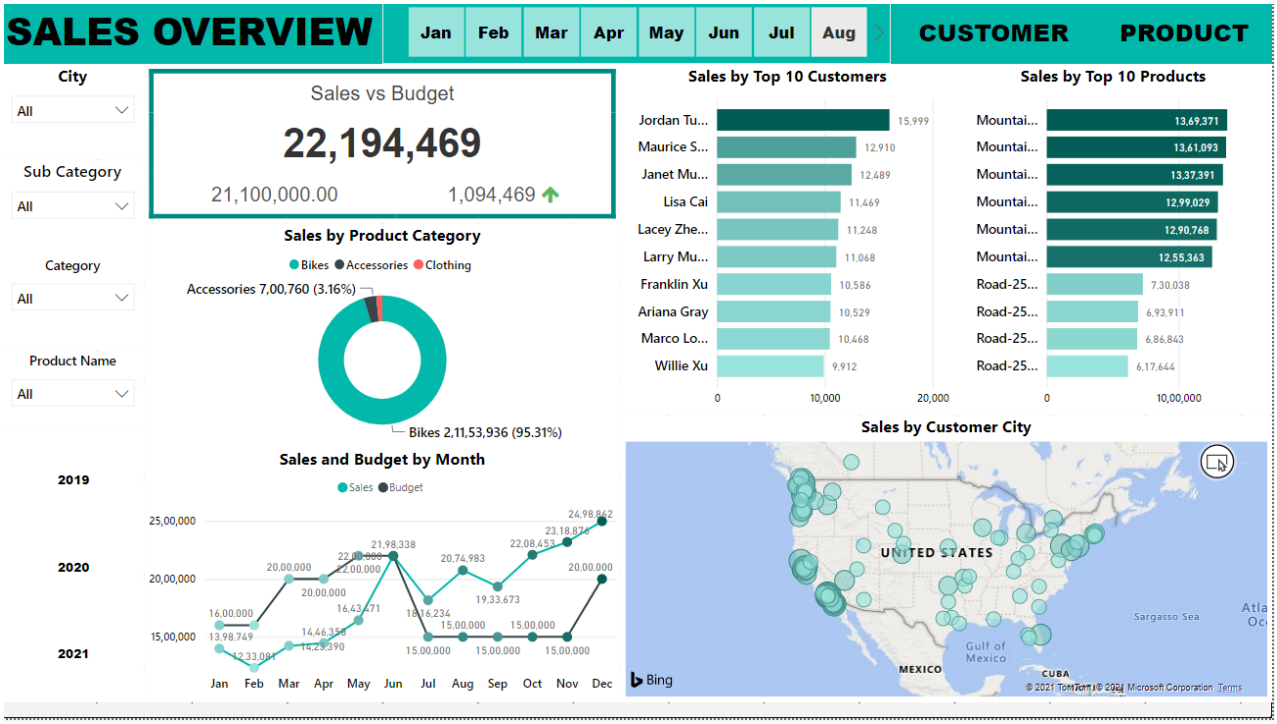
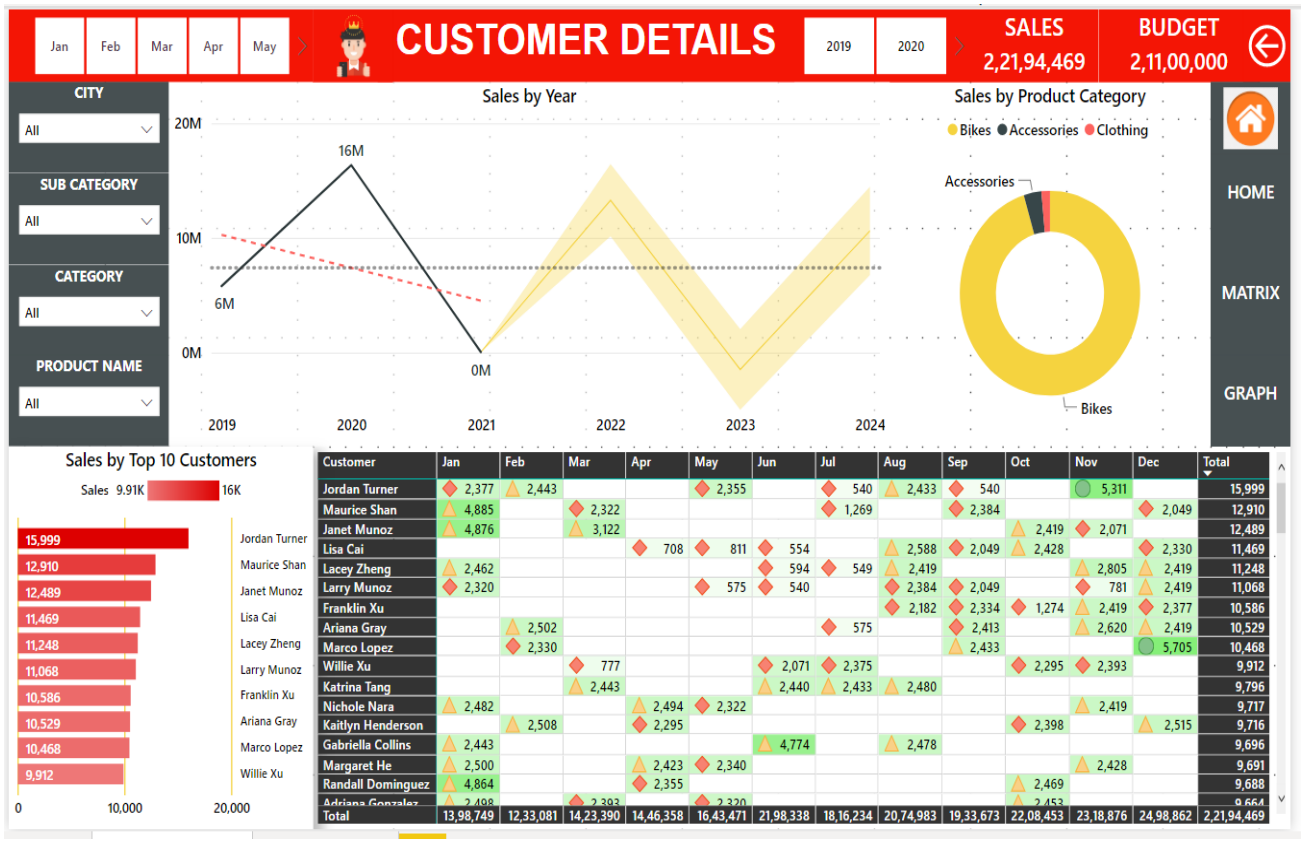
DEEPANKAR PATHAK

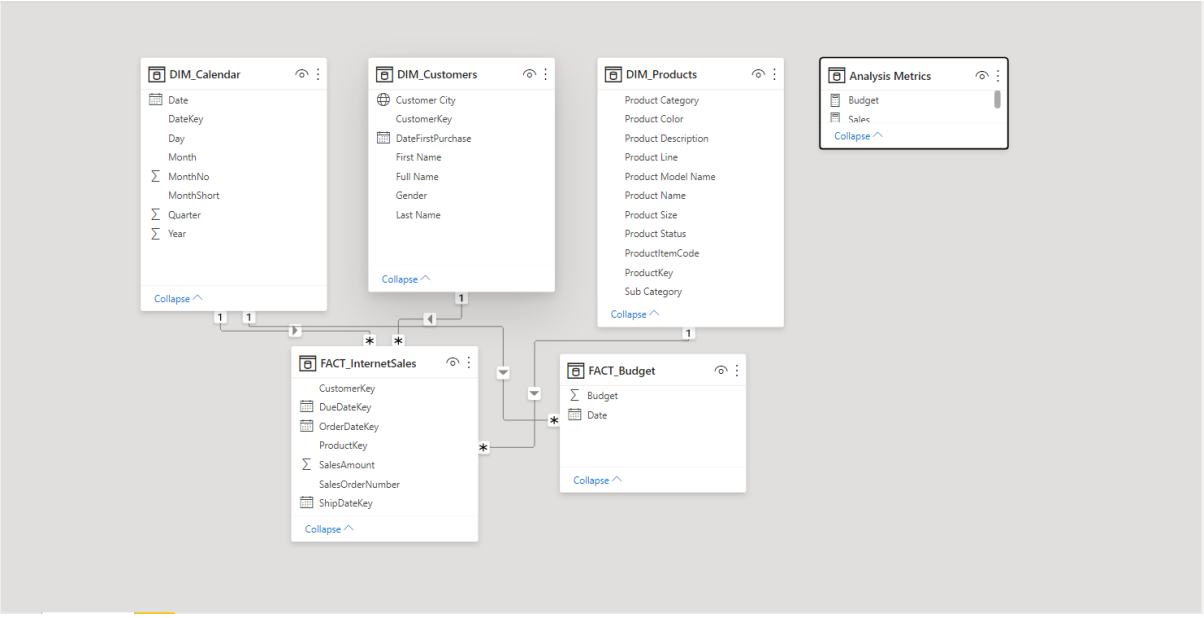
Data Analyst Project – Sales Management





Customer	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Jordan Turner	2,377	2,443			2,355		540	2,433	540		5,311		15,999
Maurice Shan	4,885		2,322				1,269		2,384			2,049	12,910
Janet Munoz	4,876		3,122							2,419	2,071		12,489
Lisa Cai				708	811	554		2,588	2,049	2,428		2,330	11,469
Lacey Zheng	2,462					594	549	2,419			2,805	2,419	11,248
Larry Munoz	2,320				575	540		2,384	2,049		781	2,419	11,068
Franklin Xu								2,182	2,334	1,274	2,419	2,377	10,586
Ariana Gray		2,502					575		2,413		2,620	2,419	10,529
Marco Lopez		2,330							2,433			5,705	10,468
Willie Xu			777			2,071	2,375			2,295	2,393		9,912
Katrina Tang			2,443			2,440	2,433	2,480					9,796
Nichole Nara	2,482			2,494	2,322						2,419		9,717
Kaitlyn Henderson		2,508		2,295						2,398		2,515	9,716
Gabriella Collins	2,443					4,774		2,478					9,696
Margaret He	2,500			2,423	2,340						2,428		9,691
Randall Dominguez	4,864			2,355						2,469			9,688
Adriana Gonzalez	2,498		2,393		2,320					2,453			9,664
Total	13,98,749	12,33,081	14,23,390	14,46,358	16,43,471	21,98,338	18,16,234	20,74,983	19,33,673	22,08,453	23,18,876	24,98,862	2,21,94,469

Data Model



Business Request & User Stories

The business request for this data analyst project was an executive sales report for sales managers. Based on the request that was made from the business we following user stories were defined to fulfil delivery and ensure that acceptance criteria were maintained throughout the project.

#	As a (role)	I want (request / demand)	So that I (user value)	Acceptance Criteria
1	Sales Manager	To get a dashboard overview of internet sales	Can follow better which customers and products sells the best	A Power BI dashboard which updates data once a day
2	Sales Representative	A detailed overview of Internet Sales per Customers	Can follow up my customers that buys the most and who we can sell more to	A Power BI dashboard which allows me to filter data for each customer
3	Sales Representative	A detailed overview of Internet Sales per Products	Can follow up my Products that sells the most	A Power BI dashboard which allows me to filter data for each Product
4	Sales Manager	A dashboard overview of internet sales	Follow sales over time against budget	A Power Bi dashboard with graphs and KPIs comparing against budget.

Data Cleansing & Transformation (SQL)

To create the necessary data model for doing analysis and fulfilling the business needs defined in the user stories the following tables were extracted using SQL.

One data source (sales budgets) was provided in Excel format and were connected in the data model in a later step of the process.

Below are the SQL statements for cleansing and transforming necessary data.

DIM Calendar:

```
-- Cleansed DIM_Date Table --
SELECT
  [DateKey],
  [FullDateAlternateKey] AS Date,
  --[DayNumberOfWeek],
  [EnglishDayNameOfWeek] AS Day,
  --[SpanishDayNameOfWeek],
  --[FrenchDayNameOfWeek],
  --[DayNumberOfMonth],
  --[DayNumberOfYear],
  --[WeekNumberOfYear],
  [EnglishMonthName] AS Month,
  Left([EnglishMonthName], 3) AS MonthShort,   -- Useful for front end date navigation and front end graphs.
  --[SpanishMonthName],
  --[FrenchMonthName],
  [MonthNumberOfYear] AS MonthNo,
  [CalendarQuarter] AS Quarter,
  [CalendarYear] AS Year --[CalendarSemester],
  --[FiscalQuarter],
  --[FiscalYear],
  --[FiscalSemester]
FROM
 [AdventureWorksDW2019].[dbo].[DimDate]
WHERE
  CalendarYear >= 2019
```

DIM Customers:

```
-- Cleansed DIM_Customers 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],
  -- Combined First and Last 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] -- Joined in Customer City from Geography Table
FROM
  [AdventureWorksDW2019].[dbo].[DimCustomer] as c
  LEFT JOIN dbo.dimgeography AS g ON g.geographykey = c.geographykey
ORDER BY
  CustomerKey ASC -- Ordered List by CustomerKey
```

DIM Products:

```
-- Cleansed DIM_Products Table --
SELECT
  p.[ProductKey],
  p.[ProductAlternateKey] AS ProductItemCode,
  --      ,[ProductSubcategoryKey],
  --      ,[WeightUnitMeasureCode]
  --      ,[SizeUnitMeasureCode]
  p.[EnglishProductName] AS [Product Name],
  ps.EnglishProductSubcategoryName AS [Sub Category], -- Joined in from Sub Category Table
  pc.EnglishProductCategoryName AS [Product Category], -- Joined in from Category Table
  --      ,[SpanishProductName]
  --      ,[FrenchProductName]
  --      ,[StandardCost]
  --      ,[FinishedGoodsFlag]
  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],
  --      ,[FrenchDescription]
  --      ,[ChineseDescription]
  --      ,[ArabicDescription]
  --      ,[HebrewDescription]
  --      ,[ThaiDescription]
```

```
  --      ,[GermanDescription]
  --      ,[JapaneseDescription]
  --      ,[TurkishDescription]
  --      ,[StartDate],
  --      ,[EndDate],
  ISNULL (p.Status, 'Outdated') AS [Product Status]
FROM
  [AdventureWorksDW2019].[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
```

FACT Internet Sales:

```
-- Cleansed FACT_InternetSales Table --
SELECT
  [ProductKey],
  [OrderDateKey],
  [DueDateKey],
  [ShipDateKey],
  [CustomerKey],
  --  ,[PromotionKey]
  --  ,[CurrencyKey]
  --  ,[SalesTerritoryKey]
  [SalesOrderNumber],
  --  [SalesOrderLineNumber],
  --  ,[RevisionNumber]
  --  ,[OrderQuantity],
  --  ,[UnitPrice],
  --  ,[ExtendedAmount]
  --  ,[UnitPriceDiscountPct]
  --  ,[DiscountAmount]
  --  ,[ProductStandardCost]
  --  ,[TotalProductCost]
  [SalesAmount] --  ,[TaxAmt]
  --  ,[Freight]
  --  ,[CarrierTrackingNumber]
  --  ,[CustomerPONumber]
  --  ,[OrderDate]
  --  ,[DueDate]
  --  ,[ShipDate]
FROM
  [AdventureWorksDW2019].[dbo].[FactInternetSales]
WHERE
  LEFT (OrderDateKey, 4) >= YEAR(GETDATE()) -2 -- Ensures we always only bring two years of date from extraction.
```