

Sadikul Haque Sadi

BSSE 1003
Exam Roll 61007



Orion Informatics Ltd



Company Profile

Founded in 1999

Outsourcing based software developing entity

Provides global software solution

35-40 developers



Working Experience

Online Office

Flexible working hour

No restricted deadlines

Friendly and Co-operative

Appreciation & Gratitude



Project Work

Overview	
Project Name & Description	Not sharable
Team Size	5
Team member's designation	Team Lead(1), Software Engineers(3), Software QA engineer(1)
Technology Used	Microsoft ASP.NET Core, C#, jQuery, TypeScript, MS Power BI, SQL Server
Deployment	Microsoft Azure



My Contribution



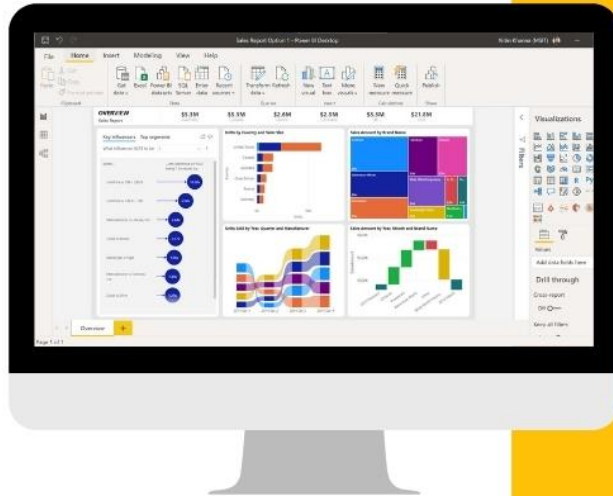
Not involved directly



R & D Work



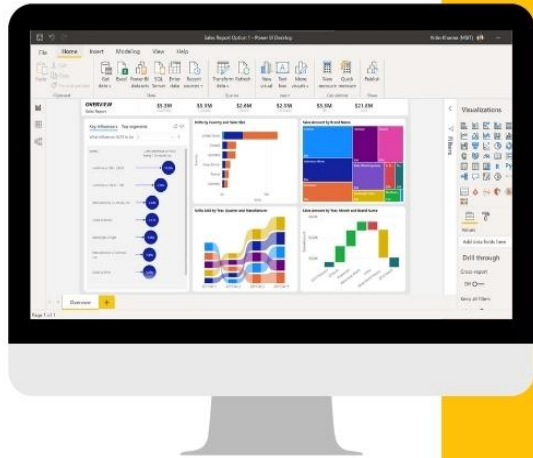
Technology



Power BI



What is Power BI?



 Power BI

A data analytics tool

Data modeling & Visualizing tool

Report building utility





My Contribution



R & D
Work

Learning phase

Report Creating & Data Visualizing

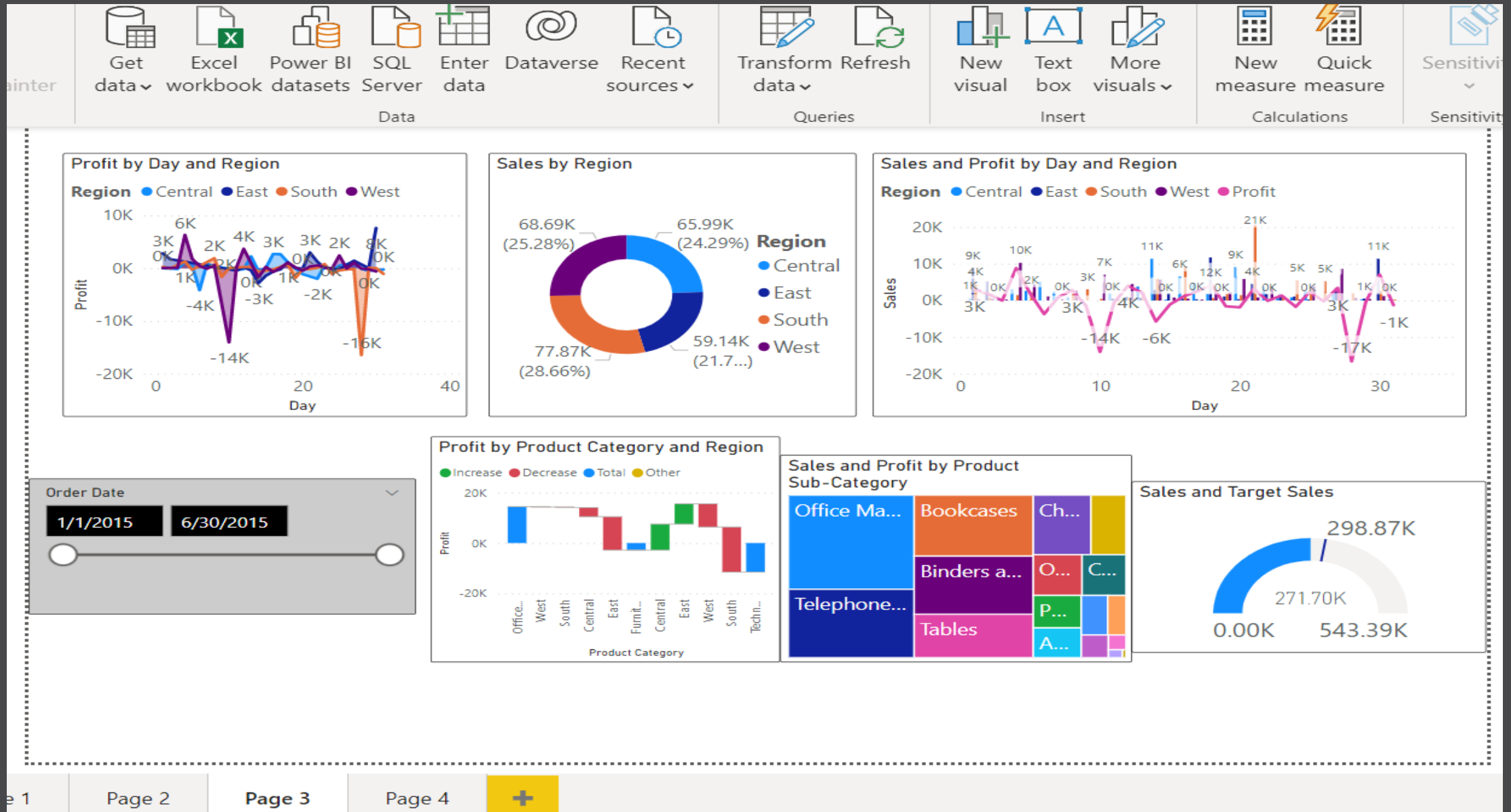
Power Query

DAX writing

Report Publishing & Embedding



Data Visualization





Data Transformation

Power Query Editor

Data Preprocessing

User Interface

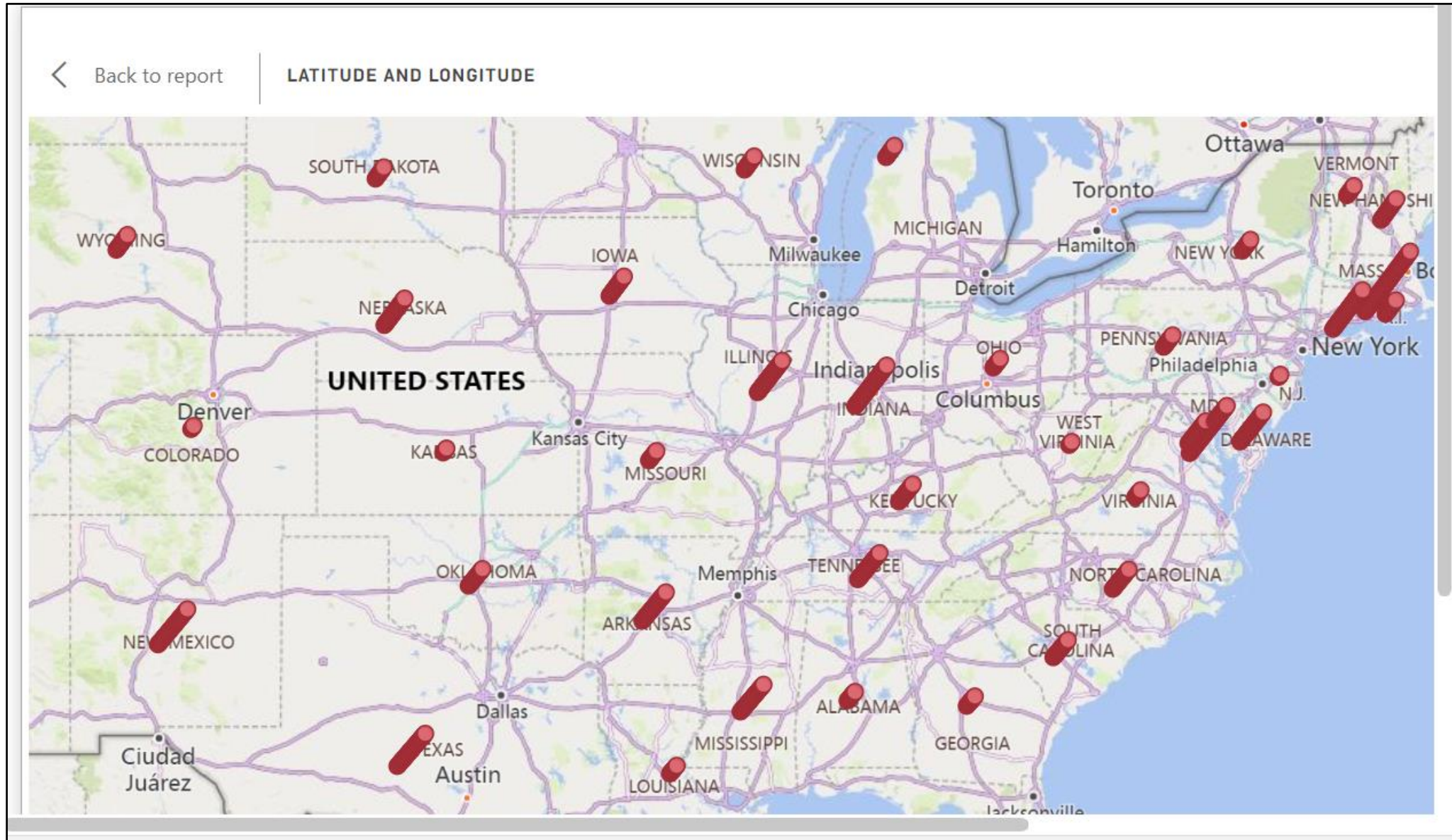
Structuring Raw Data

M formula language



Data Transformation

Dot Density Map





Power Query

M
formula
language

The screenshot shows the Power Query Advanced Editor window. The title bar reads 'Advanced Editor'. The main area is titled 'bingLat'. The M formula is as follows:

```
1 let
2   pointLookup = (address as text) =>
3   let
4     Source = Xml.Tables(Web.Contents("http://dev.virtualearth.net/REST/v1/Locations/" & address & "?o=xml&key=AkvK1ufPgJHRWo9r2uWOMrzqCE0qigY..."),
5     #"Changed Type" = Table.TransformColumnTypes(Source,{{"Copyright", type text}, {"BrandLogoUri", type text}, {"StatusCode", Int64.Type}},
6     ResourceSets = #"Changed Type"{0}[ResourceSets],
7     ResourceSet = ResourceSets{0}[ResourceSet],
8     #"Changed Type1" = Table.TransformColumnTypes(ResourceSet,{{"EstimatedTotal", Int64.Type}}),
9     Resources = #"Changed Type1"{0}[Resources],
10    Location = Resources{0}[Location],
11    #"Changed Type2" = Table.TransformColumnTypes(Location,{{"Name", type text}, {"EntityType", type text}, {"Confidence", type text}, {"Point" = #"Changed Type2"{0}[Point],
12    #"Changed Type3" = Table.TransformColumnTypes(Point,{{"Latitude", type number}, {"Longitude", type number}})
13  in
14  in
15  #"Changed Type3"
16  in
17  pointLookup
```

At the bottom of the editor, a green checkmark icon is followed by the text: 'No syntax errors have been detected.' The bottom right corner contains 'Done' and 'Cancel' buttons. On the left side of the editor, a list of queries is visible, including 'getLatLong [2]', 'getLatLang2 [2]', 'latlang [3]', 'US_Address', 'fx bingLat', 'fx fGeocode', 'fx getLatLang2', 'fx getLatLong', 'Density [2]', 'State_Branch_', 'State_Branch_', 'Other Queries [8]', 'State_Branch', 'MYAPIKey (Alz', 'starbucks_us_l', 'fx Query1', 'Table1', 'Query2', 'loop', and 'Invoked Functi...'. On the far right, a sidebar shows 'Text Analytics', 'ision', 'ture Machine Learning', and 'AI Insights'.



Power Query

M
formula
language

Advanced Editor

State_Branch_density2

Display Options ?

```
1 let
2     Source = Sql.Databases("DESKTOP-FOIBKD9"),
3     Task2 = Source{[Name="Task2"]}[Data],
4     dbo_State_Branch = Task2{[Schema="dbo",Item="State_Branch"]}[Data],
5     #"Added Custom" = Table.AddColumn(dbo_State_Branch, "Location", each [State]&"", USA),
6     #"Invoked Custom Function" = Table.AddColumn(#"Added Custom", "geo", each Query1([Location])),
7     #"Removed Columns" = Table.RemoveColumns(#"Invoked Custom Function",{"geo"}),
8     #"Renamed Columns" = Table.RenameColumns(#"Removed Columns",{"Location", "address"}),
9     #"Invoked Custom Function1" = Table.AddColumn(#"Renamed Columns", "bingLat", each bingLat([address])),
10    #"Expanded bingLat" = Table.ExpandTableColumn(#"Invoked Custom Function1", "bingLat", {"Latitude", "Longitude"}, {"bingLat.Latitude", "bingLat.Longitude"}),
11    #"Renamed Columns1" = Table.RenameColumns(#"Expanded bingLat",{"bingLat.Longitude", "Longitude"}, {"bingLat.Latitude", "Latitude"}),
12    #"Changed Type" = Table.TransformColumnTypes(#"Renamed Columns1",{"address", type text}, {"Latitude", type number}, {"Longitude", type number}),
13    #"Added lats" = Table.AddColumn(#"Changed Type", "Lats", each List.Numbers([Latitude]-[Branch]*.01, [Branch], .02)), //loop([Branch], 1, 0.01),
14    #"Added lngs" = Table.AddColumn(#"Added lats", "Lngs", each List.Numbers([Longitude]-[Branch]*.01, [Branch], .02)), //loop([Branch], 1, 0.01),
15    #"Merged latlngs" = Table.AddColumn(#"Added lngs", "LatLngs", each Table.FromColumns({[Lats], [Lngs]})),
16    #"Expanded Custom" = Table.ExpandTableColumn(#"Merged latlngs", "LatLngs", {"Column1", "Column2"}, {"Custom.Column1", "Custom.Column2"}),
17    #"Removed Columns1" = Table.RemoveColumns(#"Expanded Custom",{"Lats", "Lngs"}),
18    #"Removed Other Columns" = Table.SelectColumns(#"Removed Columns1",{"Custom.Column2", "Custom.Column1", "address"}),
19    #"Renamed Columns2" = Table.RenameColumns(#"Removed Other Columns",{"Custom.Column2", "Longitude"}, {"Custom.Column1", "Latitude"}),
20    #"Changed Type1" = Table.TransformColumnTypes(#"Renamed Columns2",{"Latitude", type number}, {"Longitude", type number})
21
22
```

✓ No syntax errors have been detected.

Done Cancel

Changed Type1

20	-152.3398309	64.06451599	Alaska, USA
21	-152.3398309	64.08451599	Alaska, USA



Data Modelling

DAX - Data Analysis Expression

Calculated columns

Functional Language

Measures

Built in functions

Custom tables

Create new information



Data Modelling

DAX - Data Analysis Expression

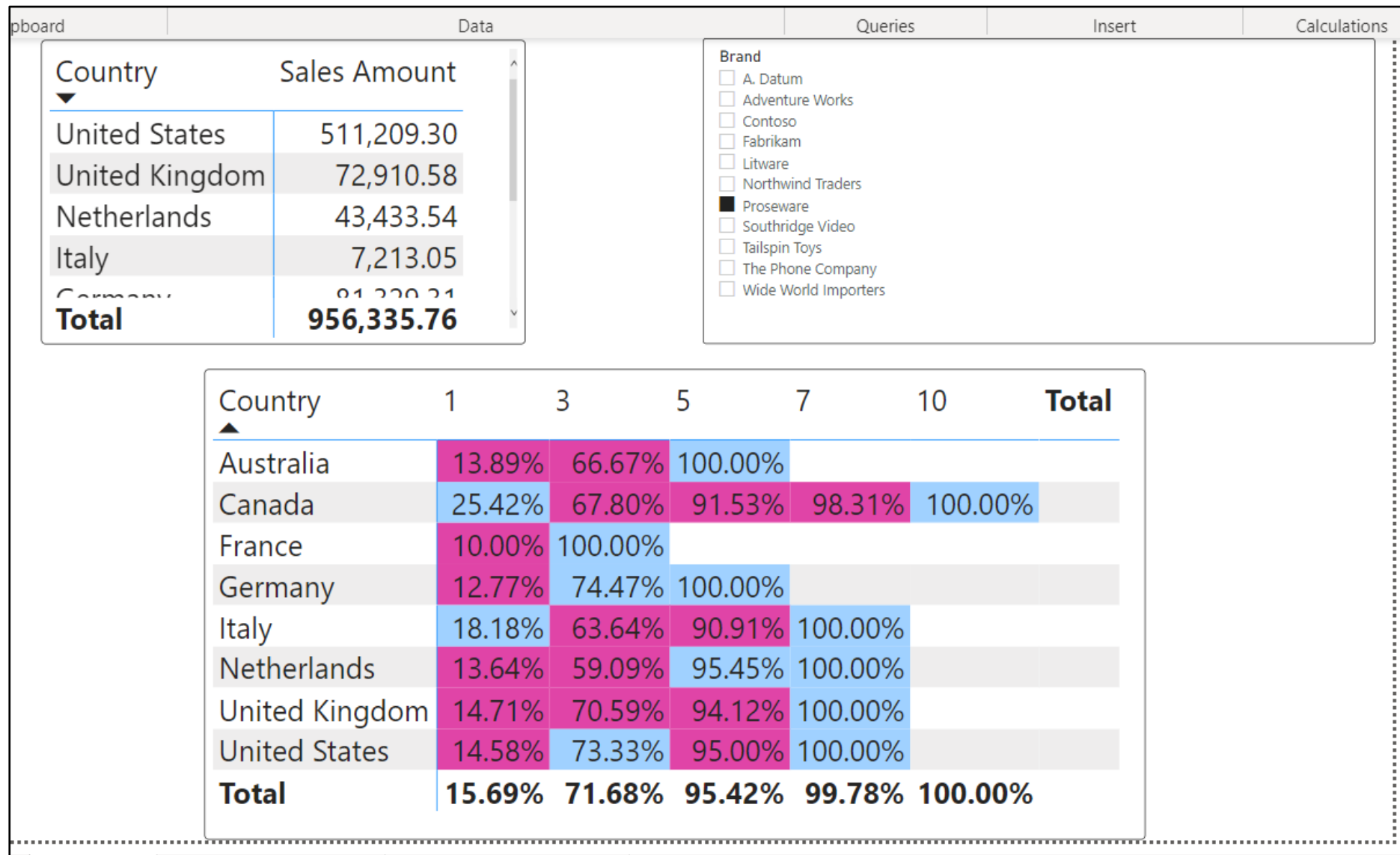
Screenshot of the Microsoft Power BI Desktop ribbon, showing the 'Measure tools' tab selected. The ribbon includes tabs for Home, Insert, Modeling, View, Help, Format, Data / Drill, Table tools, and Measure tools. The 'Measure tools' tab is active, displaying options for 'Data category' (Uncategorized) and 'Data category' (Uncategorized). Below the ribbon, the 'Structure' pane shows a table named 'Sales' with columns 'Pct x days' and 'Days'. The 'Format' pane shows the 'Pct x days' column selected, with the 'Format' dropdown set to 'Percentage' and the 'Decimal places' set to 2. The 'Measure tools' pane shows the 'New measure' button. The main area displays the DAX formula for 'Pct x days':

```
1 Pct x days =  
2     Var x = SELECTEDVALUE(Days[Days])  
3     var result = CALCULATE(  
4         Sales[Percentage Order], Sales[Delivery Days] <= x  
5     )  
6     var prevDay = Calculate(Max(Days[days]), Days[Days]<x)  
7     var prevResult = CALCULATE(  
8         Sales[Percentage Order], Sales[Delivery Days] <= prevDay  
9     )  
10    return if(prevResult < 1, result)
```



Data Modelling

DAX - Data Analysis Expression





Data Modelling

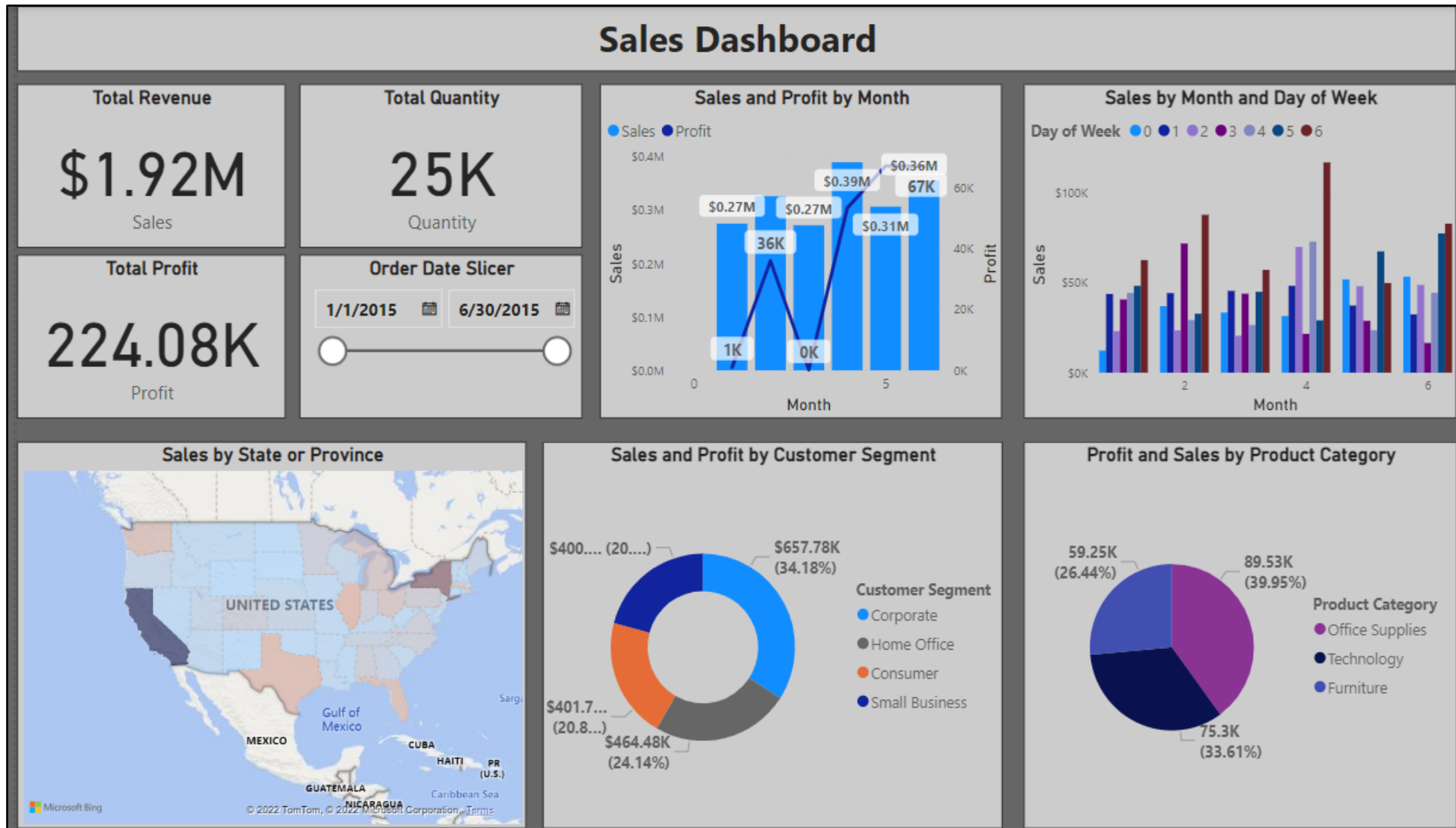
DAX - Data Analysis Expression

```
75 #deliveries till x th day
76 Pct x days =
77     Var x = SELECTEDVALUE (Days[Days])
78     var result = CALCULATE (
79         Sales[Percentage Order], Sales[Delivery Days] <= x
80     )
81     return result
82
83
84 #return result less than 1
85 Pct x days =
86     Var x = SELECTEDVALUE (Days[Days])
87     var result = CALCULATE (
88         Sales[Percentage Order], Sales[Delivery Days] <= x
89     )
90     return if(result<1, result)
91
92 #show 100 only once
93 Pct x days =
94     Var x = SELECTEDVALUE (Days[Days])
95     var result = CALCULATE (
96         Sales[Percentage Order], Sales[Delivery Days] <= x
97     )
98     var prevDay = Calculate(Max(Days[days]), Days[Days]<x)
99     var prevResult = CALCULATE (
100         Sales[Percentage Order], Sales[Delivery Days] <= prevDay
101     )
102     return if(prevResult < 1, result)
103
104
105
106 #conditional color fomattting - background colors to matrix cells values
107 Colour =
108 var currentValue = [Pct x days]
109 var totalValue = CALCULATE (
110     [Pct x days], DEMONSTRATEDS (C-100)
111 )
112 var colorValue = CALCULATE (
113     [Pct x days], DEMONSTRATEDS (C-100)
114 )
115 var colorValue = [Pct x days]
```



Report Building

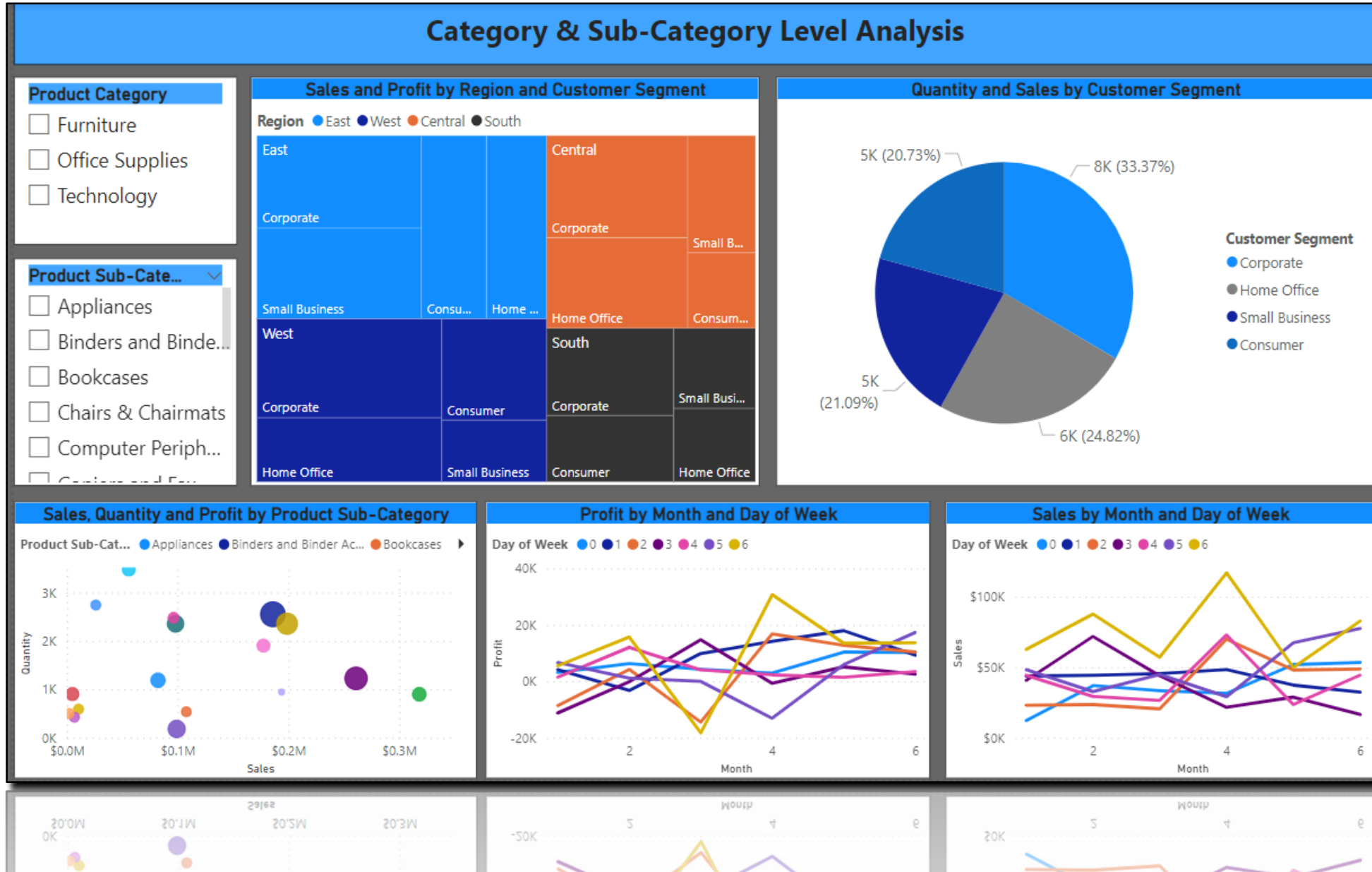
Report & Dashboard





Report Building

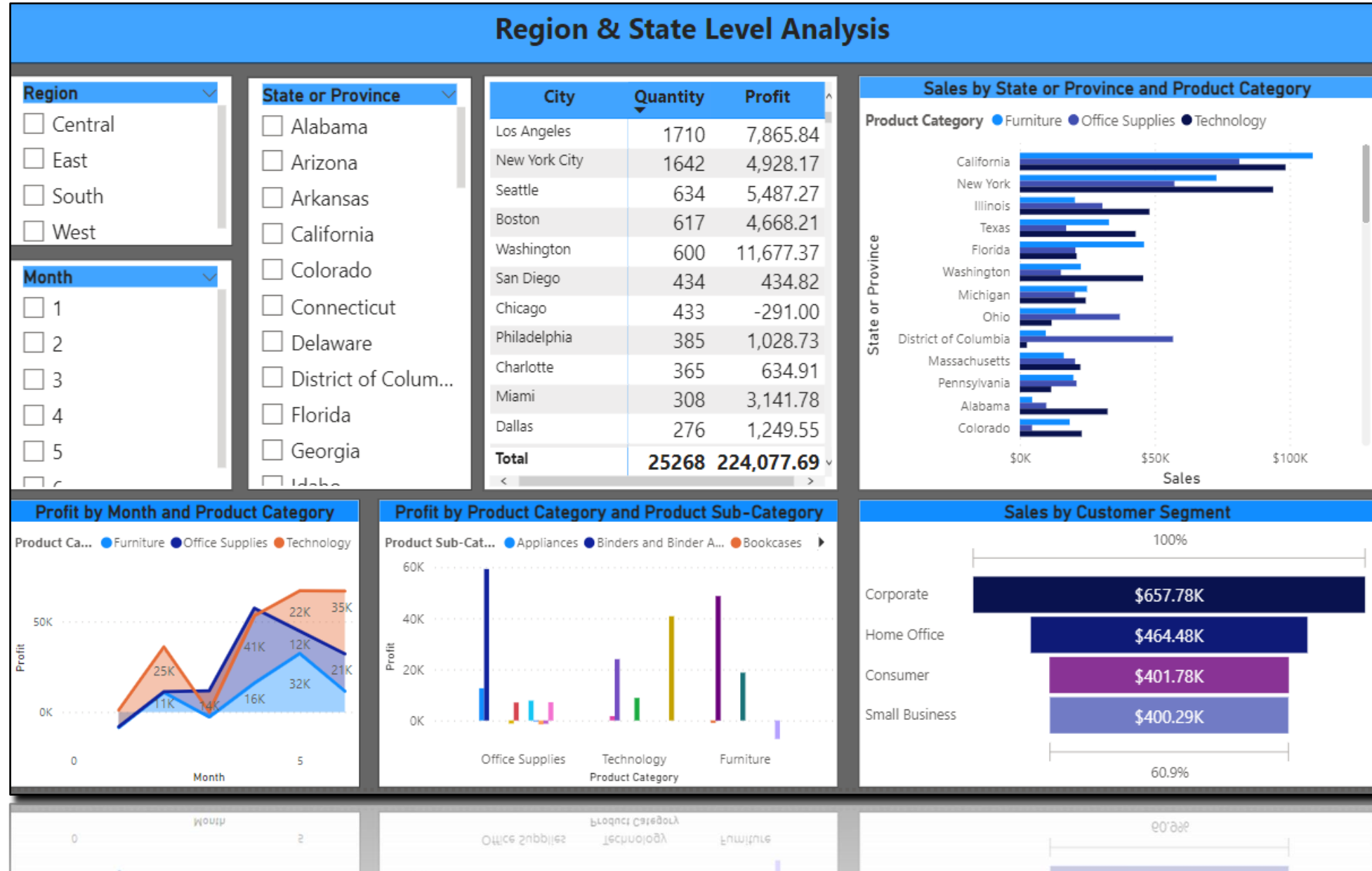
Report & Dashboard





Report Building

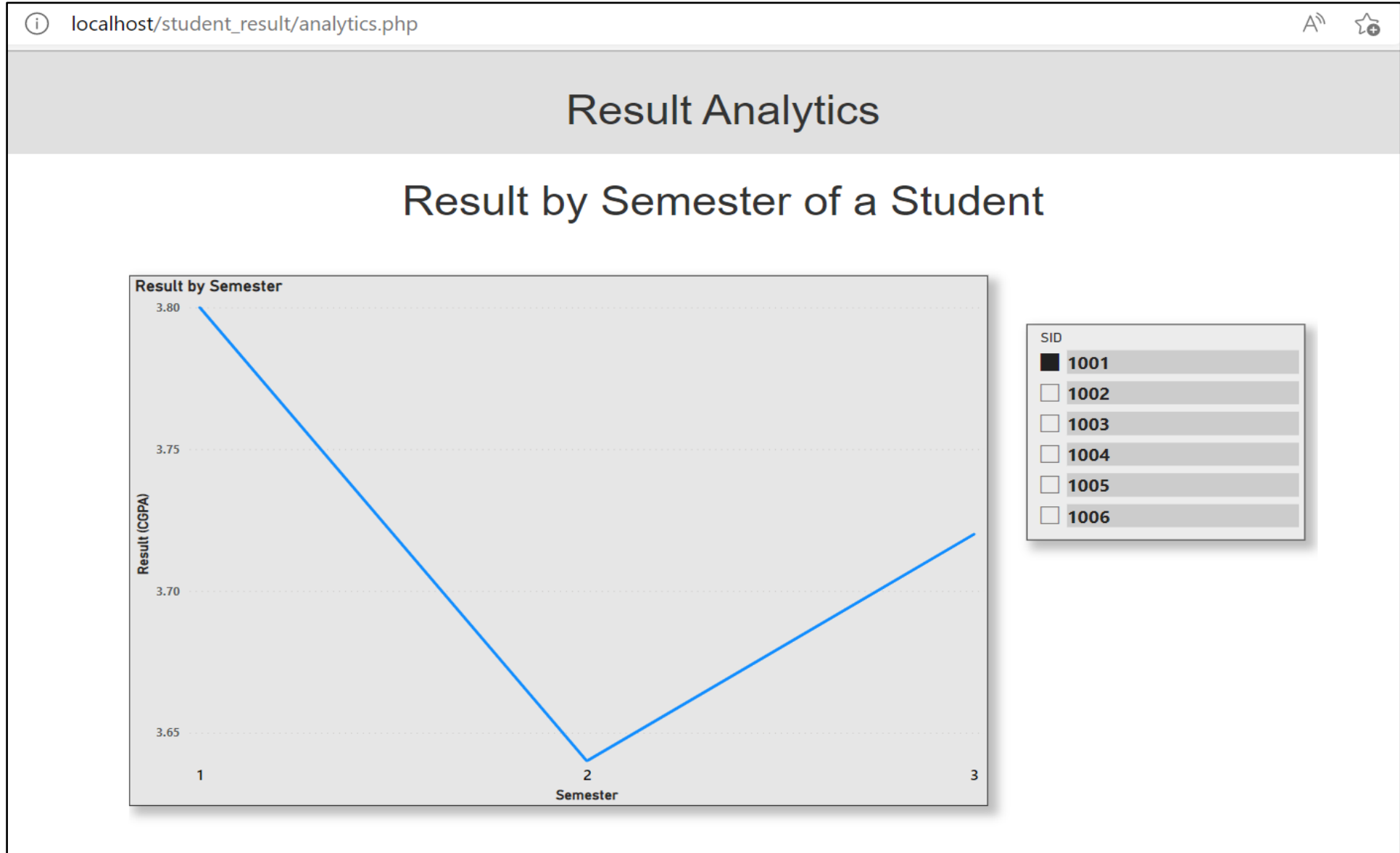
Report & Dashboard





Report Publishing

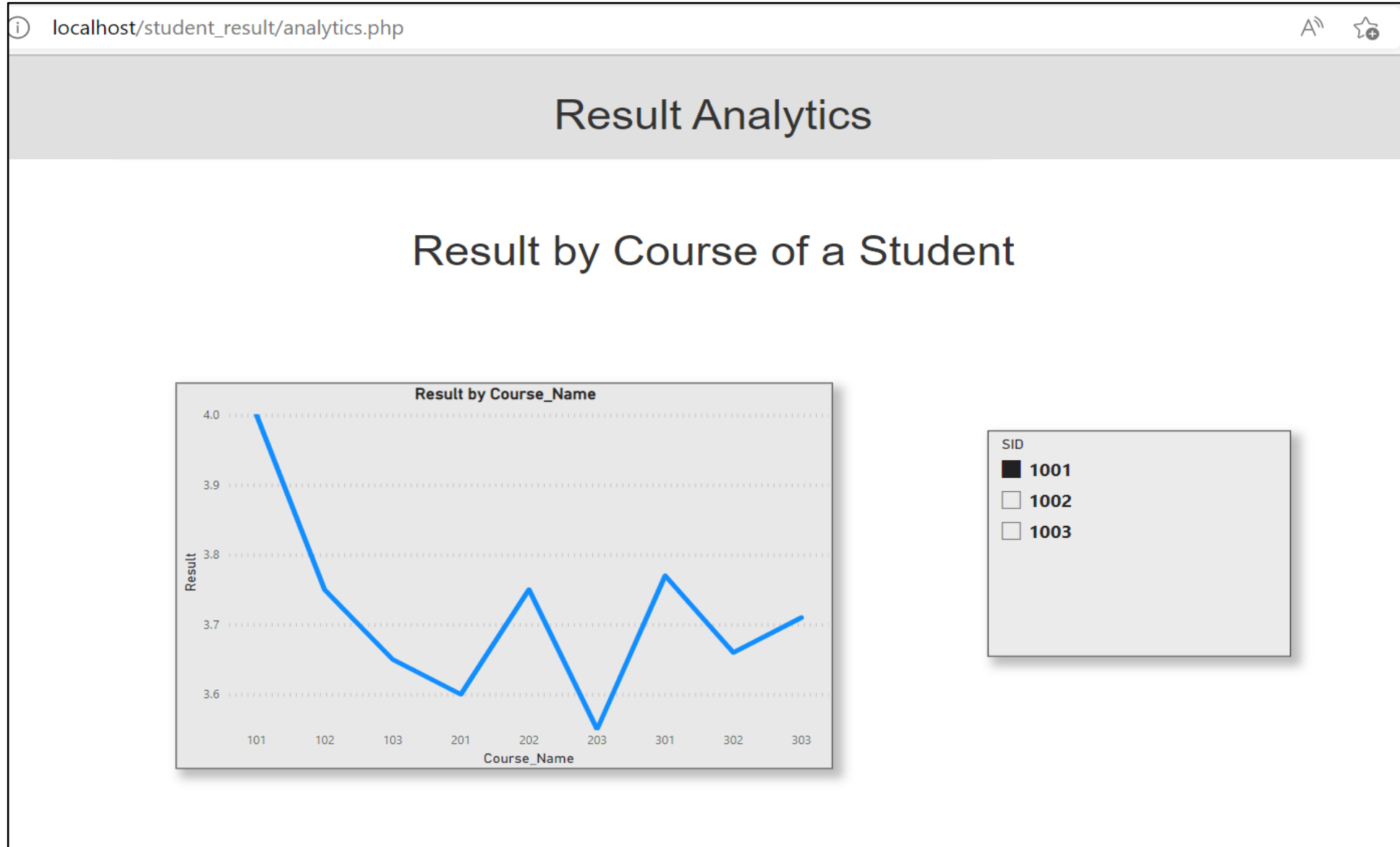
Report
Embedding
In a
Website





Report Publishing

Report Embedding In a Website





Soft Skills

Communication skill

Negotiating skill



Time management

Self-esteem



Q & A

Thank

you

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THANK