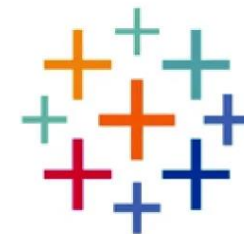




Power BI



+tableau

POWER BI / TABLEAU

พัฒนธัญญ์ วิจิตรวงศ์เจริญ

# สารบัญ

➤ Tableau

➤ Power BI

# See how Tableau customers turn insights into action

[See all of our customer stories](#)



**Charles Schwab equips 16K employees with Tableau.**

[READ MORE](#) —>



**Dubai Airports identifies new revenue streams with Tableau.**

[READ MORE](#) —>



**Whole Foods Market democratizes data for 18k employees.**

[READ MORE](#) —>



**Verizon sees a 43% reduction in support calls.**

[READ MORE](#) —>

## What Is Tableau? | Tableau

See & Understand your data.



## Tableau Desktop







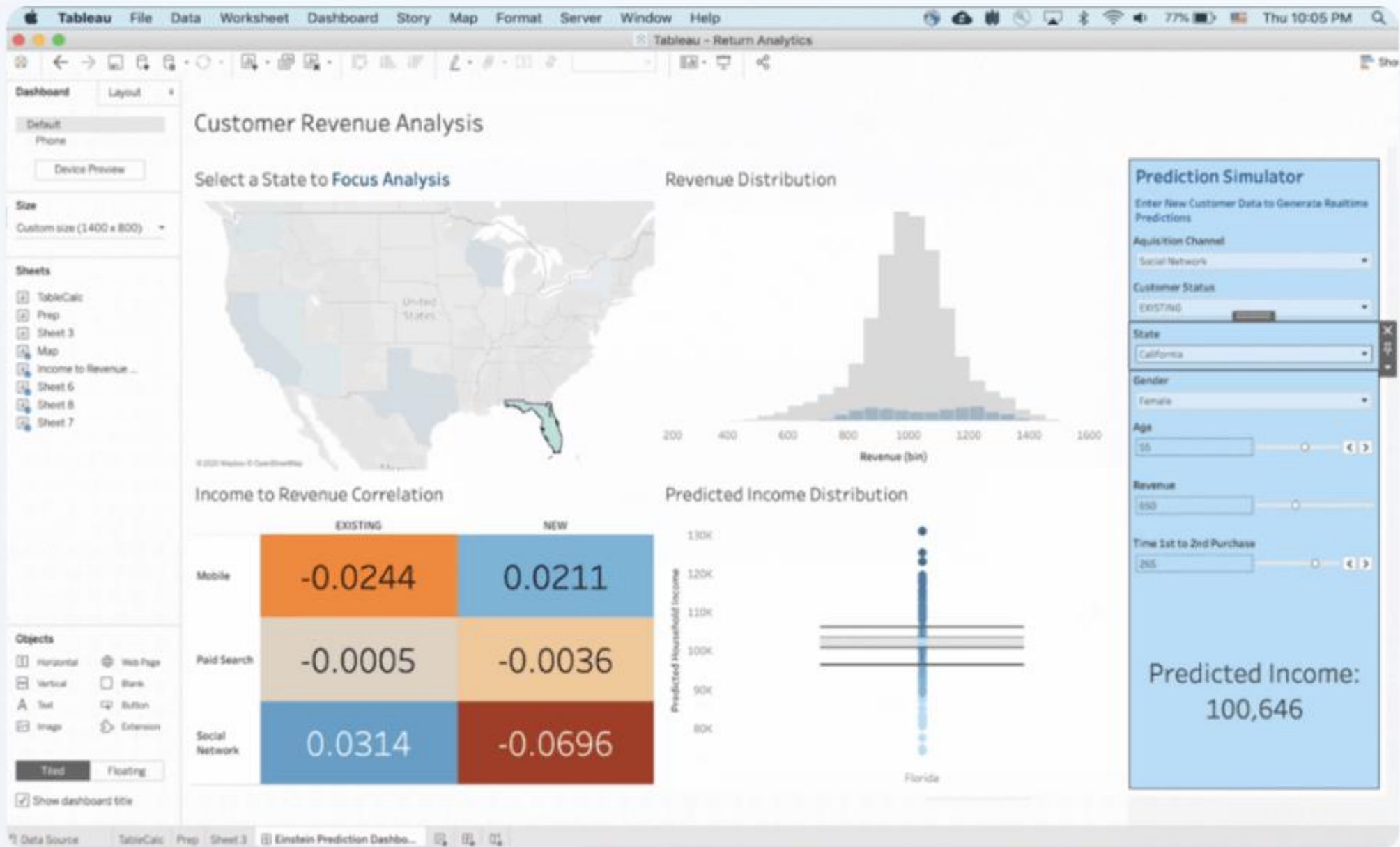
# INSTALLATION

Download : Tableau desktop

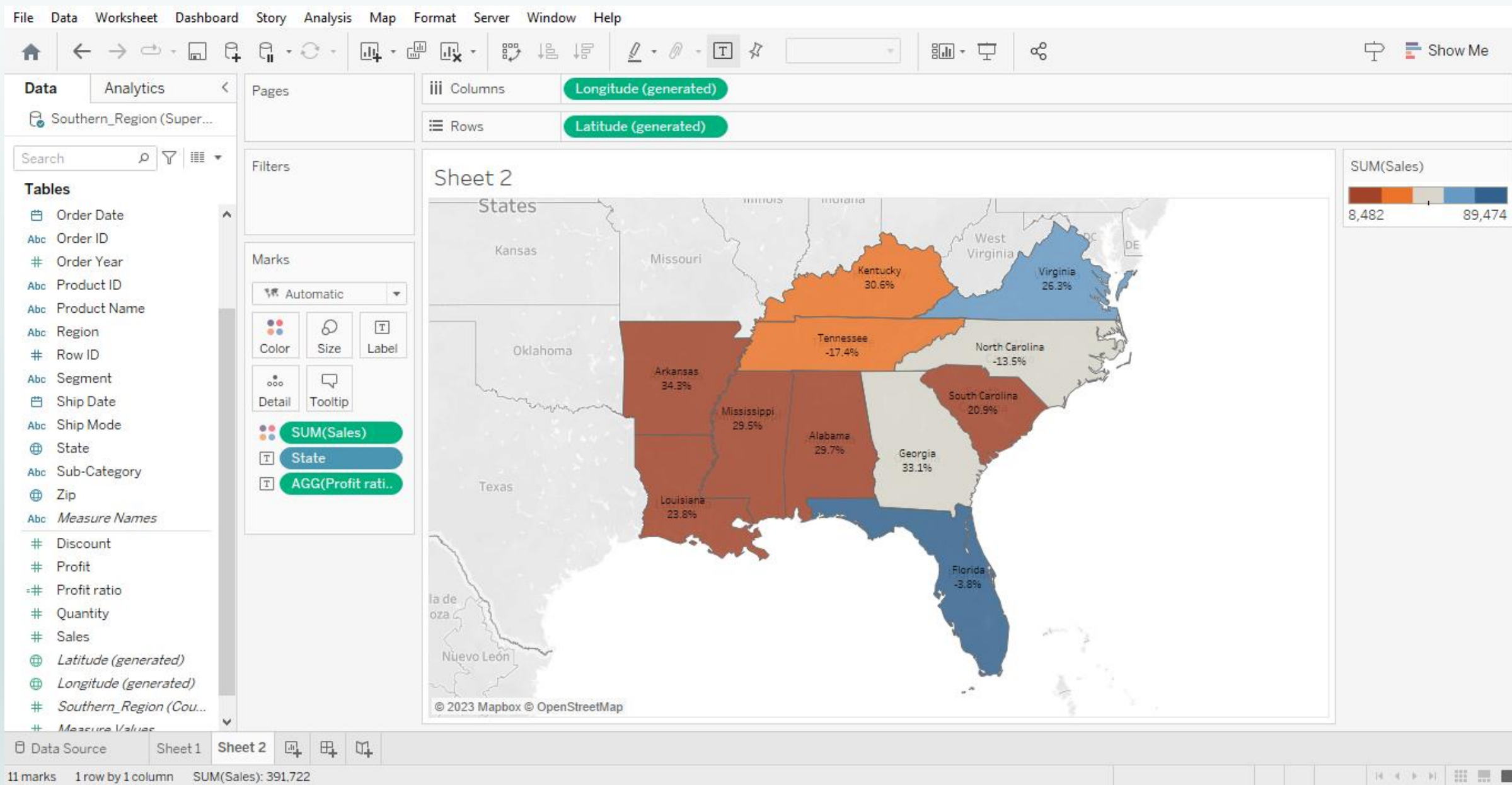
Free trial 14 days

Student version => 1 years

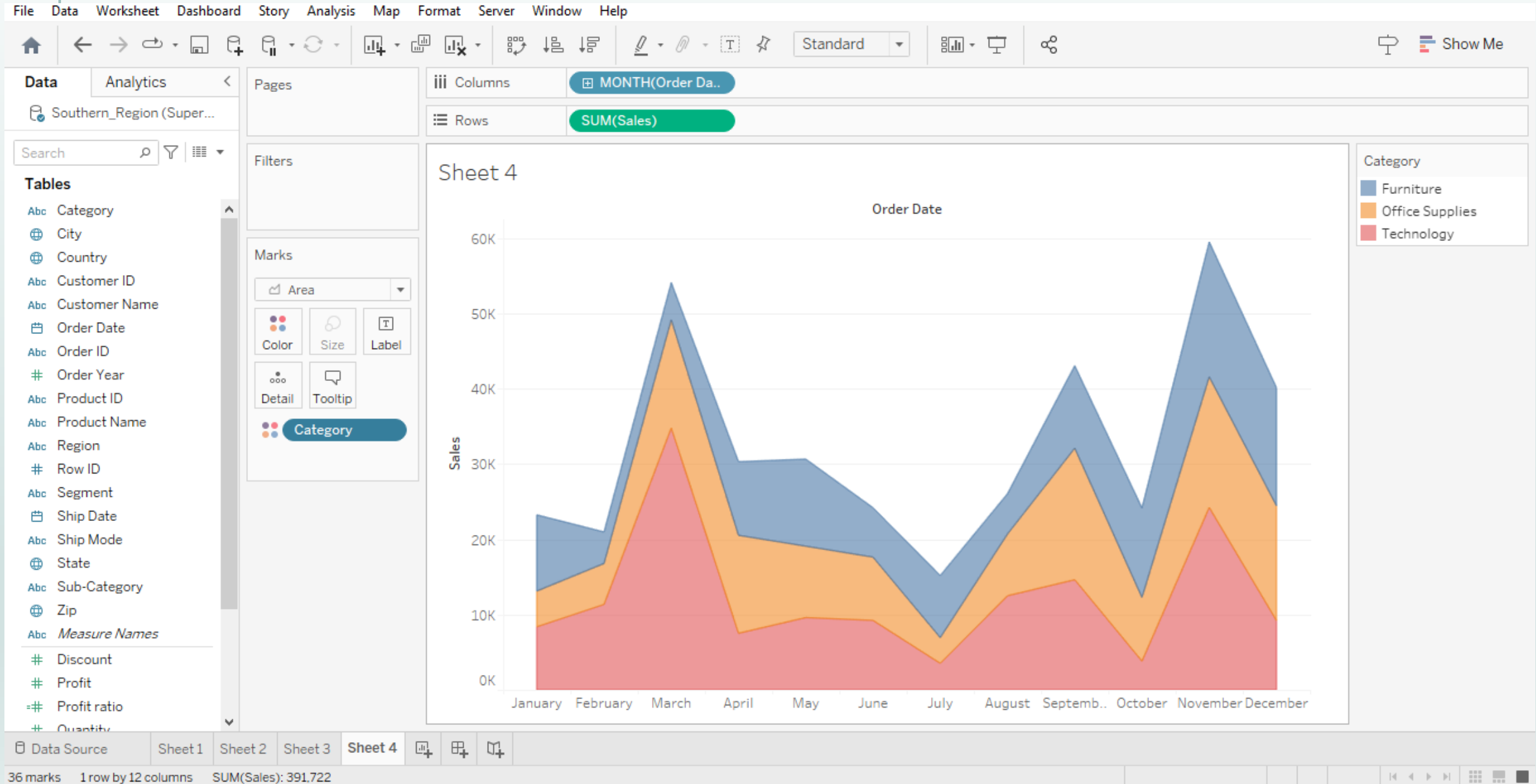




## ➤ Geography



## ➤ Area chart



## Text table

FileDataWorksheetDashboardStoryAnalysisMapFormatServerWindowHelp

Home

Back

Forward

Undo

Redo

Print

Save

Find

Copy

Paste

Format

Standard

Table

Chart

Share

Show Me

Format AGG(Profit ratio)

A

Fields

Axis

Pane

Default

Numbers: 12345600....

Clear

Pages

Filters

Marks

Measure Values

Columns

Measure Names

Rows

Key Performance Indicator

Category	Sales	Discount	Profit	Quantity	Profit ratio
Furniture	\$117,298.68	40	6,771	1,291	5.8%
Office Supplies	\$125,651.31	167	19,986	3,800	15.9%
Technology	\$148,771.91	32	19,992	1,118	13.4%

Data Source

Sheet 1

Sheet 2

Sheet 3

Sheet 4

Sheet 5

Sheet 5 (2)

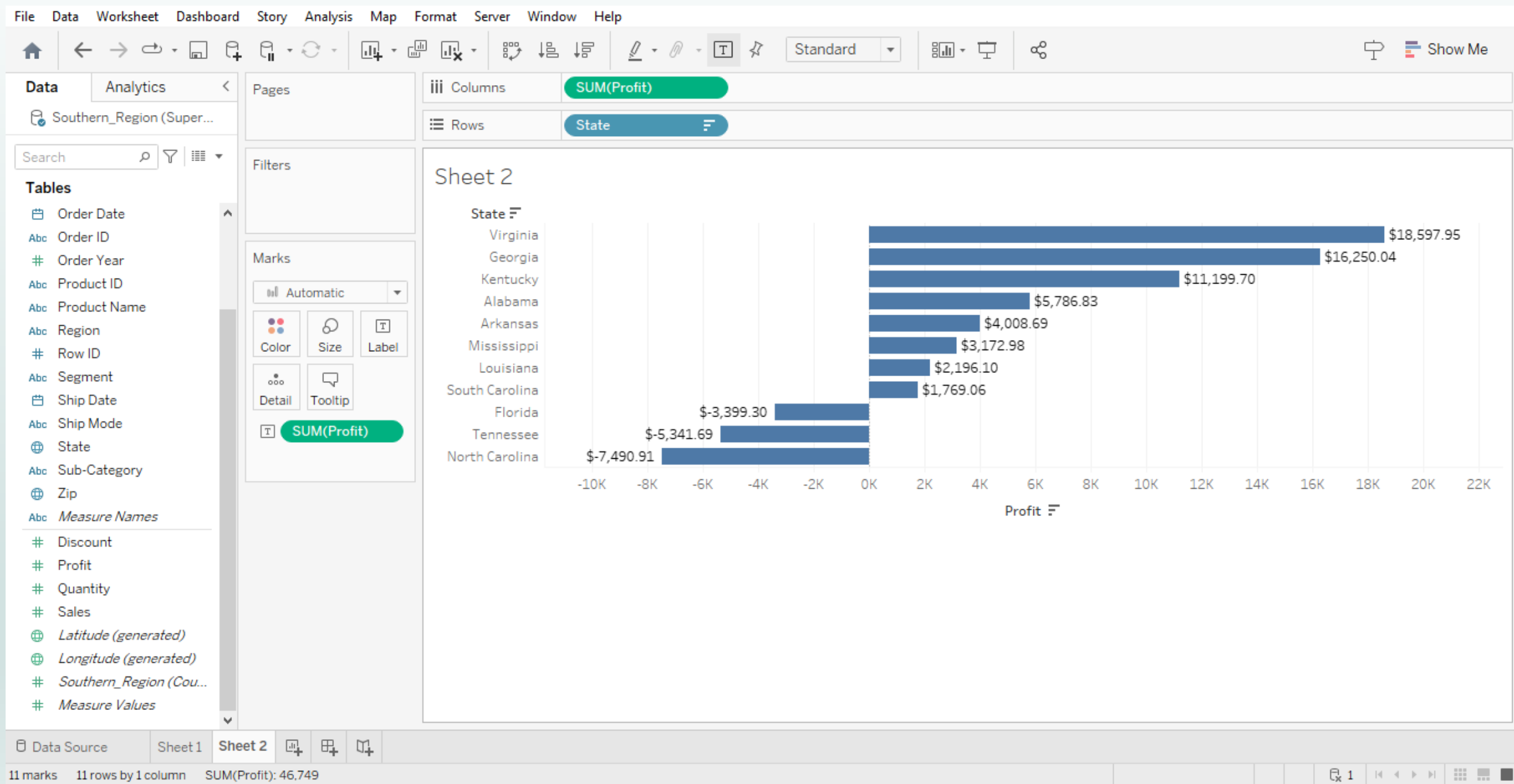
Sheet 5 (3)

15 marks

3 rows by 5 columns

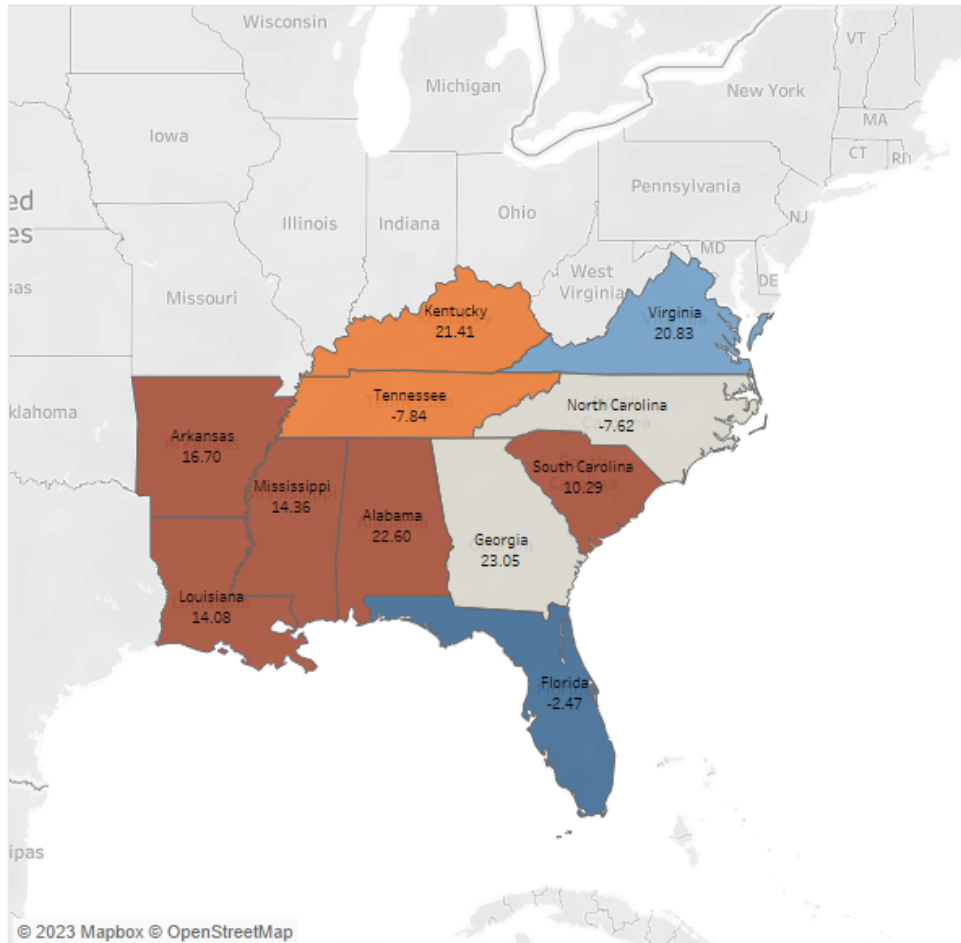
SUM of Measure Values: 444.919

## ➤ Bar chart

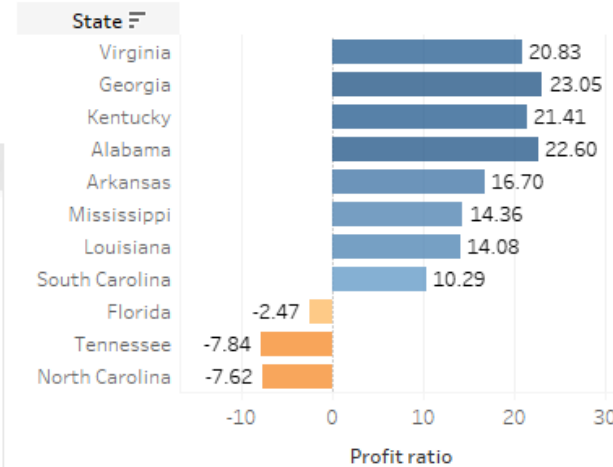


Category	Count of Souther..	Discount	Profit	Profit ratio	Quantity	Sales
Furniture	332	40	6,771	5	1,291	117,299
Office Supplies	995	167	19,986	5	3,800	125,651
Technology	293	32	19,992	18	1,118	148,772

Profit ratio by Geography



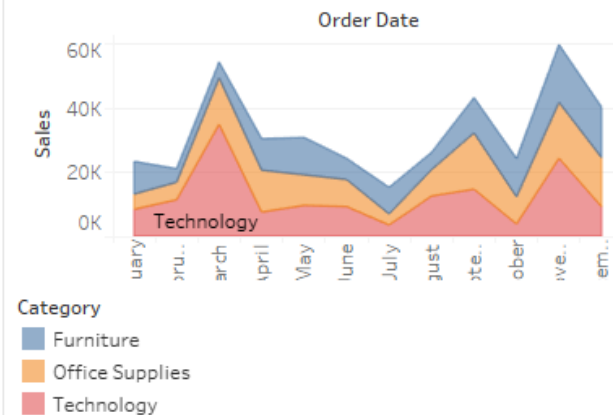
Profit Ratio Bar chart



Profit ratio



Area chart





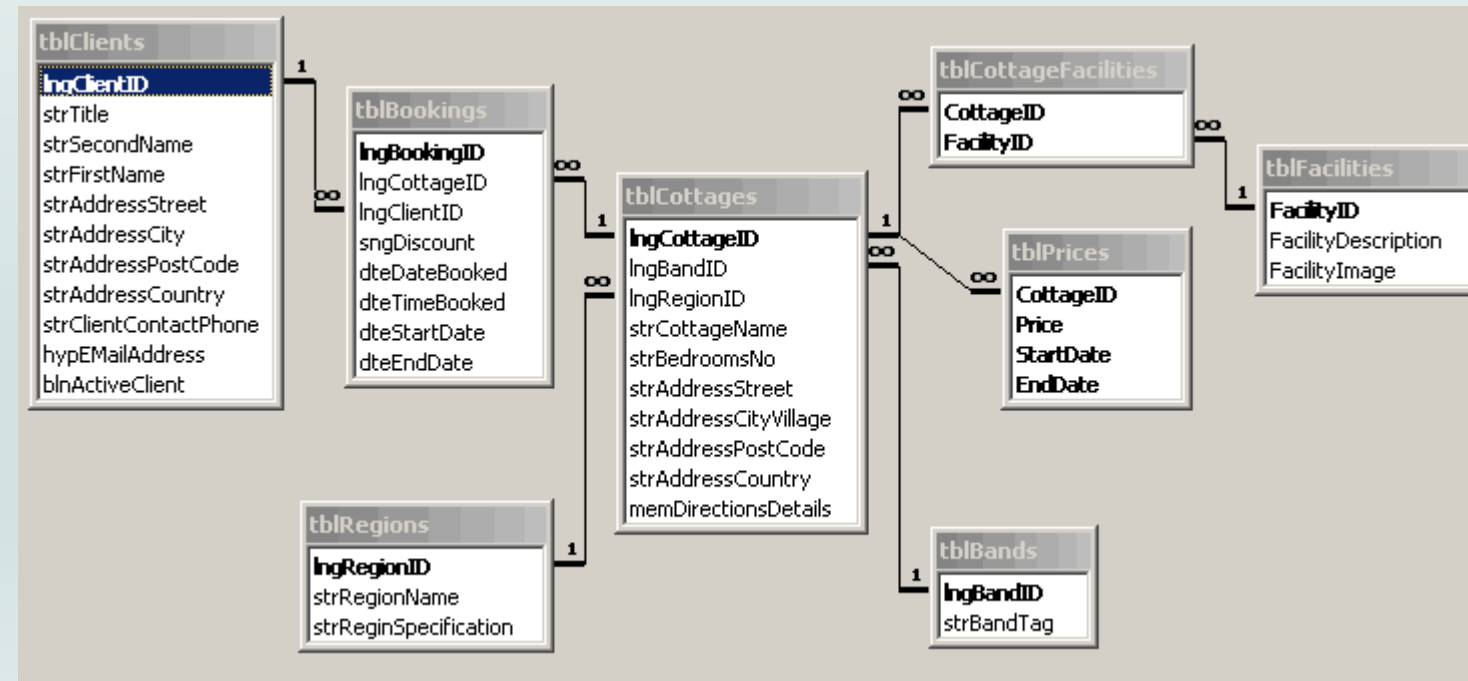
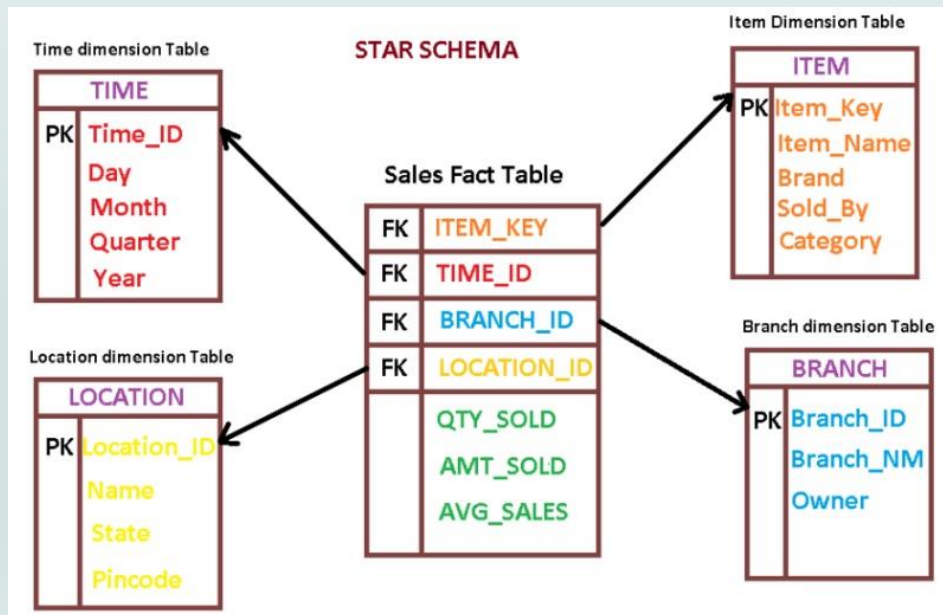


# Power BI

# DATA MODELING

Data modeling = Tables + Relationships

การสร้างความสัมพันธ์ระหว่างข้อมูลในตารางต่างๆ



# DAX (DATA ANALYSIS EXPRESSION)

## DAX Syntax

Commission = Sum(Sale[Revenue])\*0.5

Name

Function

Table[Column]

Operator

Value

# MEASURE

เป็นการสร้างสูตรที่ไม่มีการเพิ่มข้อมูลเข้าไปในตาราง

The image illustrates the process of creating a measure in Power BI. It consists of two main parts connected by a large green arrow pointing from left to right.

**Left Panel (Power BI Desktop Interface):**

- Ribbon:** The **Measure tools** ribbon is selected under the **Table tools** group.
- Fields:** The **Name** field is set to **TotalSales** and the **Home table** is set to **BranchID2**.
- Format:** The **Format** dropdown is set to **Whole number**. Below it, there are options for currency (\$), percentage (%), and decimal places (0).
- Data category:** The **Data category** dropdown is set to **Uncategorized**.
- Buttons:** The **New measure** button (calculator icon) and **Quick measure** button (lightning bolt icon) are highlighted with a red rectangle.

**Right Panel (Fields Pane):**

- The **Fields** pane shows a list of fields from the **BranchID2** table: **Branch**, **BranchID**, **TotalSales**, **EmployeeID3**, **Employee Name**, and **EmployeeID**.
- The **TotalSales** field is highlighted with a red rectangle, indicating it is the selected measure.

**Formula Bar:**

At the bottom left, the formula bar shows the DAX formula: `1 TotalSales = sum(Sales1[Sales])`.

## WHAT IS POWER BI?

Turning your data into smarter  
decision for your business.

# MICROSOFT POWER BI



Power BI

## คืออะไร...

Microsoft Power BI เป็นเทคโนโลยีเพื่อใช้ในการนำข้อมูลจากแหล่งต่าง ๆ

หลากหลายแหล่ง มาปรับแต่ง จัดระเบียบ สร้างความสัมพันธ์ คำนวณ

เพื่อสร้างรายงาน ในรูปแบบ Interactive Dashboard แสดงผลผ่านอุปกรณ์ต่าง ๆ ไม่ว่าจะเป็น

Mobile, Tablet หรือ PC ได้ เพื่อให้งานอันแสนหน้าเบื่อ เป็นงานที่สนุก รวดเร็ว เข้าถึงได้จากทุกที่ ทุกเวลา

จากทุก ๆ อุปกรณ์ เพราะข้อมูลเป็นเรื่องสำคัญ ต่อการตัดสินใจ

### YOUR WHOLE DATA



EXTRACT TRANSFORM LOAD



MULTI SOURCE



Apps

1

Get DATA  
& ETL

POWER QUERY

2

DATA  
MODEL

DAX HIERARCHY  
RELATIONSHIPS  
DATA CATEGORIES



3

Visualization



MICROSOFT POWER BI  
DESKTOP

4

PUBLISH

POWER BI  
SERVICE

6

On Premise  
Data Gateway  
(Power BI Gateway)

FEATURES



# FEATURES

○ DATA PREPARATION

○ DATA MODELING

○ VISUALIZATION

○ AUTOMATIC SYNC DATA

○ CREATE AMAZING DATA EXPERIENCES

○ DASHBOARD

○ BUSINESS INTELLIGENCE

○ ARTIFICIAL INTELLIGENCE

○ STREAM ANALYTICS IN REAL TIME

Data Gateway  
(Power BI Gateway)

5

ACCESS



เข้าถึงได้ทุกที่ทุกเวลา  
แสดงผลได้ในทุกอุปกรณ์

“CREATE INTERACTIVE DASHBOARD & VISUALIZATION IN MINUTES”

เพราะการตัดสินใจในเชิงธุรกิจต้องการความถูกต้องและรวดเร็ว การวิเคราะห์ข้อมูลแบบ Self Data Analysis จะช่วยให้คุณนำข้อมูลมหาศาล จัดระเบียบ พร้อมสร้างรายงานให้สวยงาม และ Interactive แสดงผลได้ทุก Platform ทำให้คุณสามารถได้ข้อมูลก่อนใคร ด้วย “Power BI Desktop”

○ หลักสูตร Power BI Desktop for Business Analytics (12 ชั่วโมง)

<https://www.9experttraining.com/power-bi-desktop-business-analytics-training-course>



○ หลักสูตร Power BI Desktop for Business Analytics (Online)

<https://online.9experttraining.com/courses/microsoft-power-bi-for-business-analytics>



# Process Flow of Power BI

## Collection of data sources



## Power BI Desktop



## Power BI service



## Power BI Mobile



FileHomeInsertModelingViewHelpExternal Tools

Paste

Cut

Copy

Format painter

Clipboard

Get data

Excel workbook

Data hub

SQL Server

Enter data

Dataverse

Recent sources

Data

Transform data

Refresh data

Queries

New visual

Text box

More visuals

Insert

New measure

Quick measure

Calculations

Sensitivity

Share

Sign in

Search

Store Sales Overview

This Year Sales by Chain

Lindseys \$6M

Fashions Direct \$16M

10 New Stores

104 Total Stores

This Year Sales by PostalCode and Store Type

Store Type: New Store Same Store

Total Sales Variance by FiscalMonth and District Manager

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District

Filters

Search

Filters on this page

Chain is (All)

City is (All)

District is (All)

Name is (All)

Open Month is (All)

Store Type is (All)

Add data fields here

Visualizations

Build visual

Values

Add data fields here

Drill through

Cross-report

Keep all filters

Add drill-through fields here

Fields

Search

Sales

District

Item

Store

Time

Info

Overview

District Monthly Sales

New Stores

Page 2 of 4

53%

## Get Data

All

File

Database

















Power Platform

Azure

Online Services

Other

### Online Services

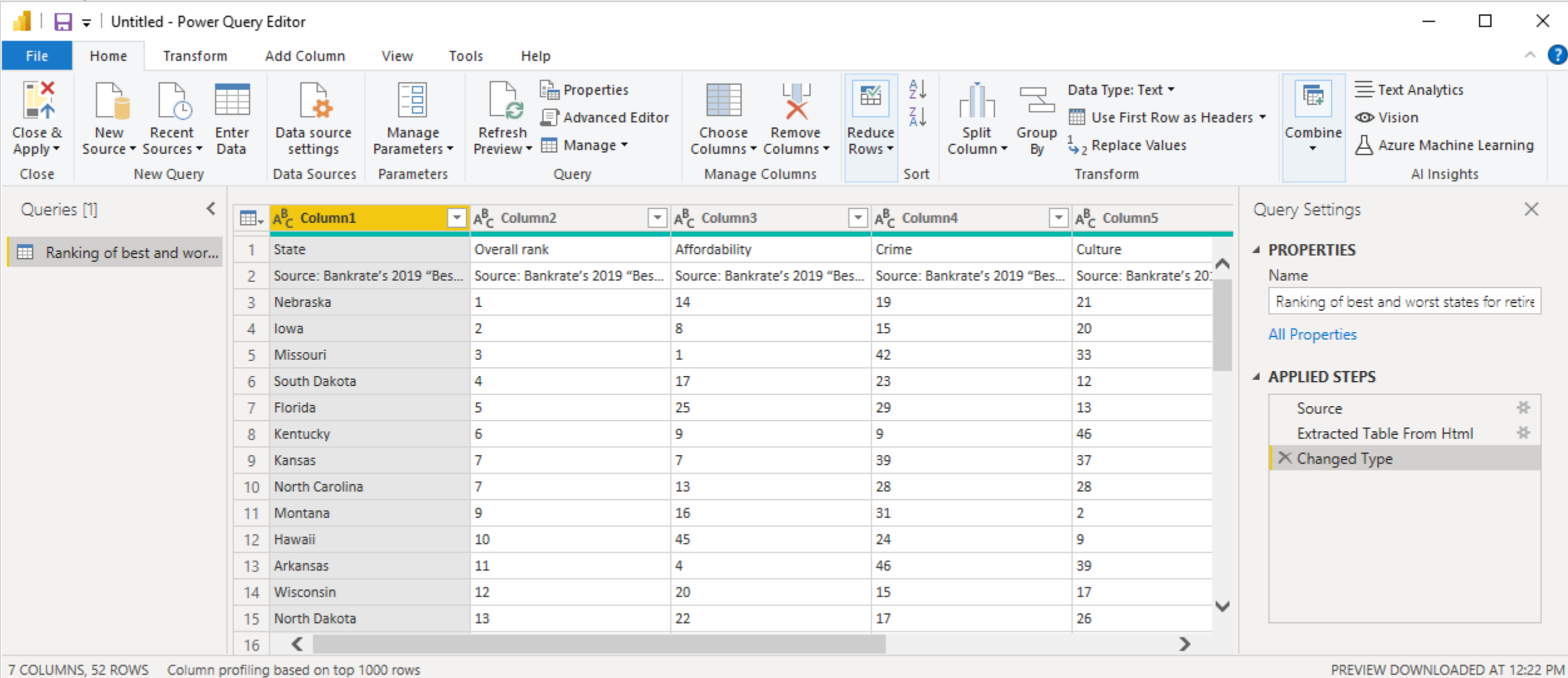
-  SharePoint Online List
-  Microsoft Exchange Online
-  Dynamics 365 (online)
-  Dynamics NAV
-  Dynamics 365 Business Central
-  Dynamics 365 Business Central (on-premises)
-  Microsoft Azure Consumption Insights (Beta)
-  Azure DevOps (Beta)
-  Azure DevOps Server (Beta)
-  Salesforce Objects
-  Salesforce Reports
-  Google Analytics
-  Adobe Analytics
-  appFigures (Beta)
-  Data.World - Get Dataset (Beta)
-  Facebook

Certified Connectors

Connect

Cancel

On the **Home** ribbon, in the **Queries** section, select **Transform data**.  
The **Power Query Editor** window appears.



The screenshot displays the Power Query Editor interface. The ribbon at the top includes 'File', 'Home', 'Transform', 'Add Column', 'View', 'Tools', and 'Help'. The 'Transform' ribbon is currently selected, showing various data transformation options. The main area contains a table with 5 columns and 15 rows of data. The 'Query Settings' pane on the right shows the 'APPLIED STEPS' list, which includes 'Source', 'Extracted Table From Html', and 'Changed Type'.

Queries [1]

	Column1	Column2	Column3	Column4	Column5
1	State	Overall rank	Affordability	Crime	Culture
2	Source: Bankrate's 2019 "Bes...	Source: Bankrate's 2019 "Bes...	Source: Bankrate's 2019 "Bes...	Source: Bankrate's 2019 "Bes...	Source: Bankrate's 20...
3	Nebraska	1	14	19	21
4	Iowa	2	8	15	20
5	Missouri	3	1	42	33
6	South Dakota	4	17	23	12
7	Florida	5	25	29	13
8	Kentucky	6	9	9	46
9	Kansas	7	7	39	37
10	North Carolina	7	13	28	28
11	Montana	9	16	31	2
12	Hawaii	10	45	24	9
13	Arkansas	11	4	46	39
14	Wisconsin	12	20	15	17
15	North Dakota	13	22	17	26

7 COLUMNS, 52 ROWS Column profiling based on top 1000 rows

Query Settings

**PROPERTIES**

Name

Ranking of best and worst states for retire

[All Properties](#)

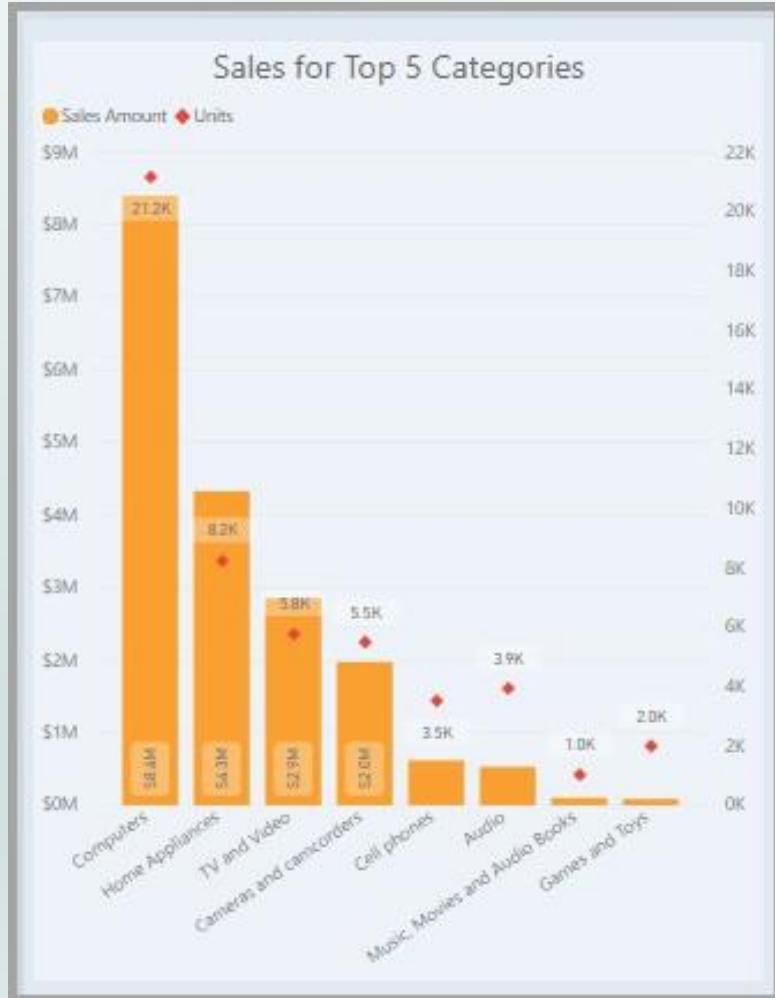
**APPLIED STEPS**

- Source
- Extracted Table From Html
- Changed Type

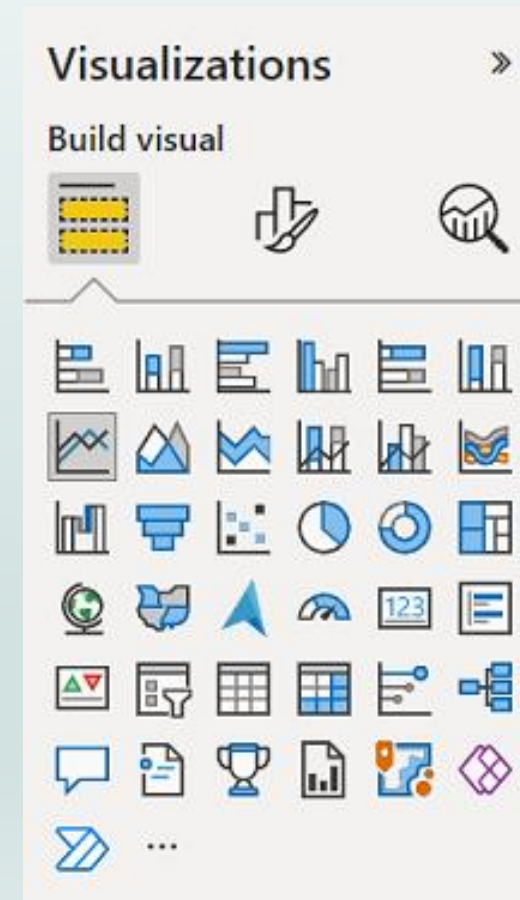
PREVIEW DOWNLOADED AT 12:22 PM



drag *fields* onto the report canvas to create *visuals*. A visual is a graphic representation of the data in your model.

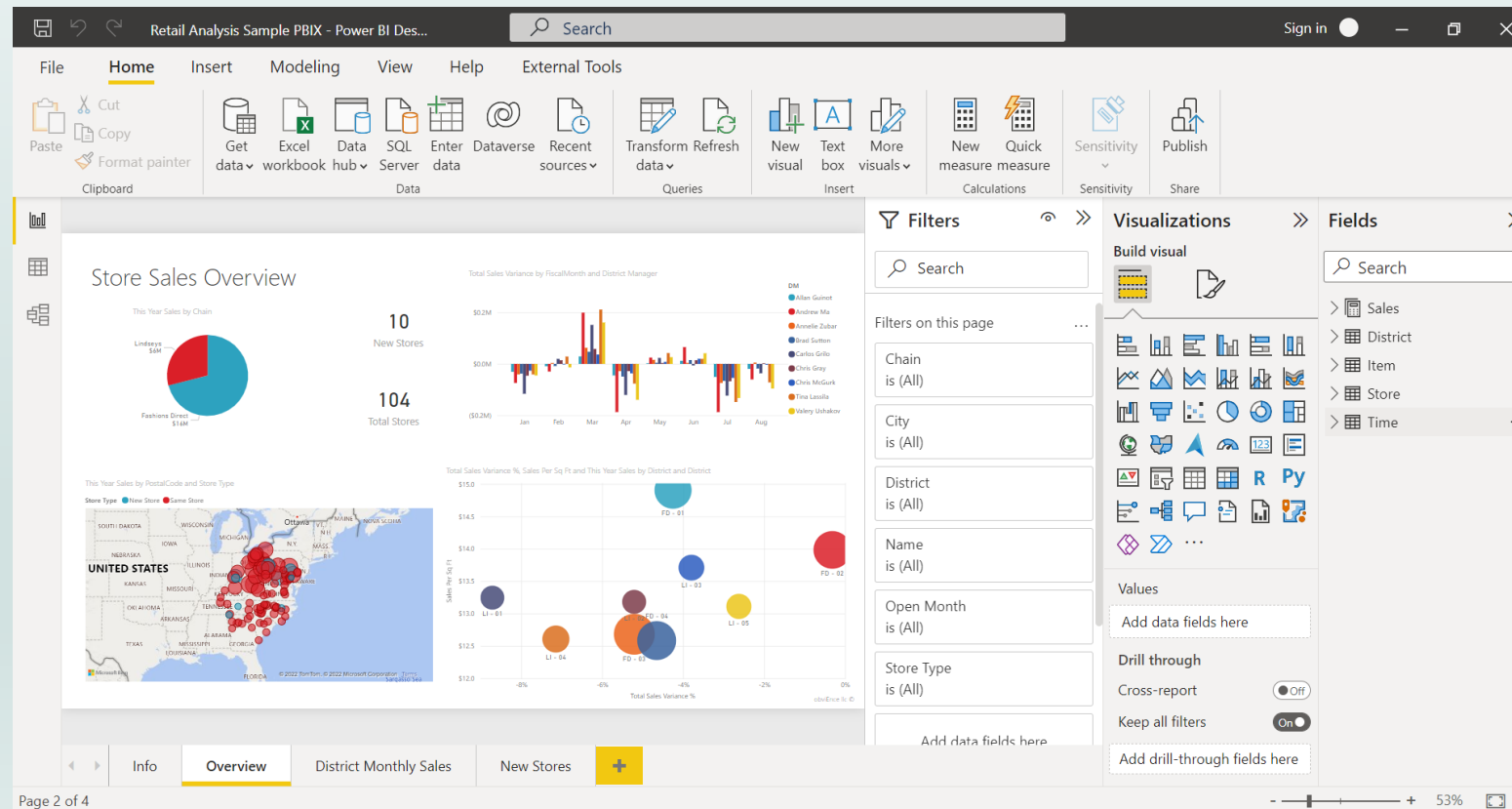


From the **Visualizations** pane, select the **Build visual** icon.



# CREATE REPORT

In the following image, you see the first page of a Power BI Desktop report, named **Overview**, as seen on the tab near the bottom of the image.



# SHARE REPORT

Select **Publish** from the **Home** ribbon.

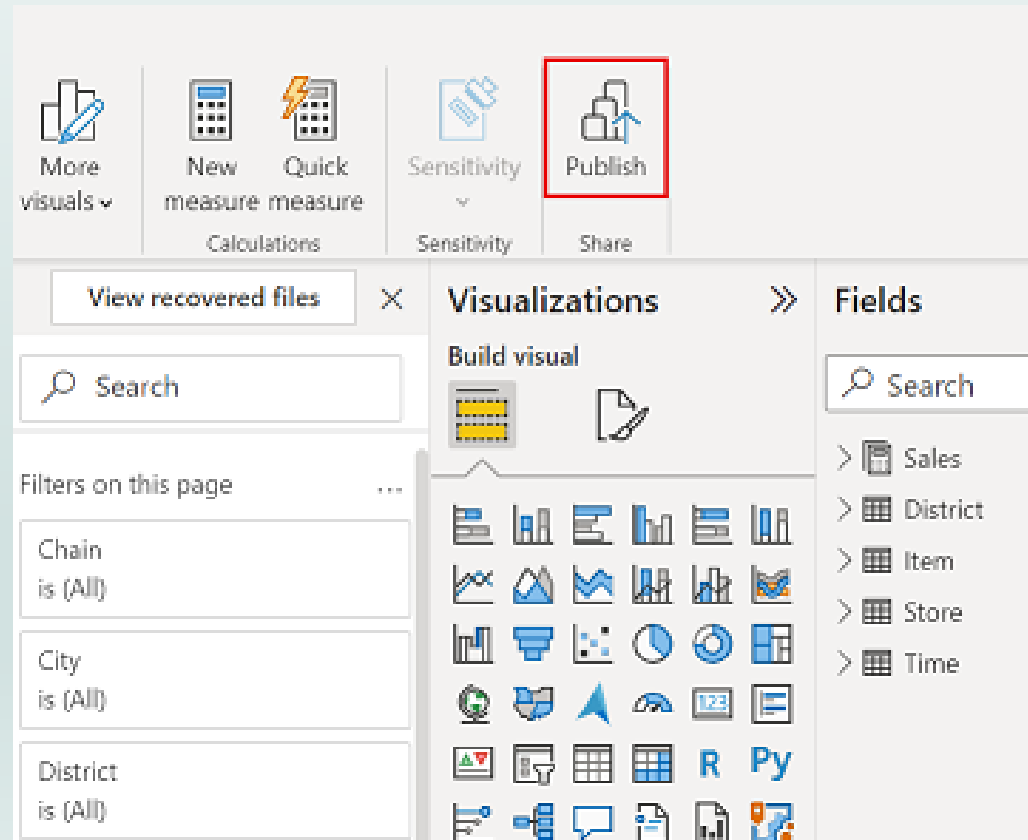


Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms



Source: Gartner (February 2021)

# POWER BI WORKSHOP

File ชื่อ Power BI workshop.xlsx



Q

&

A