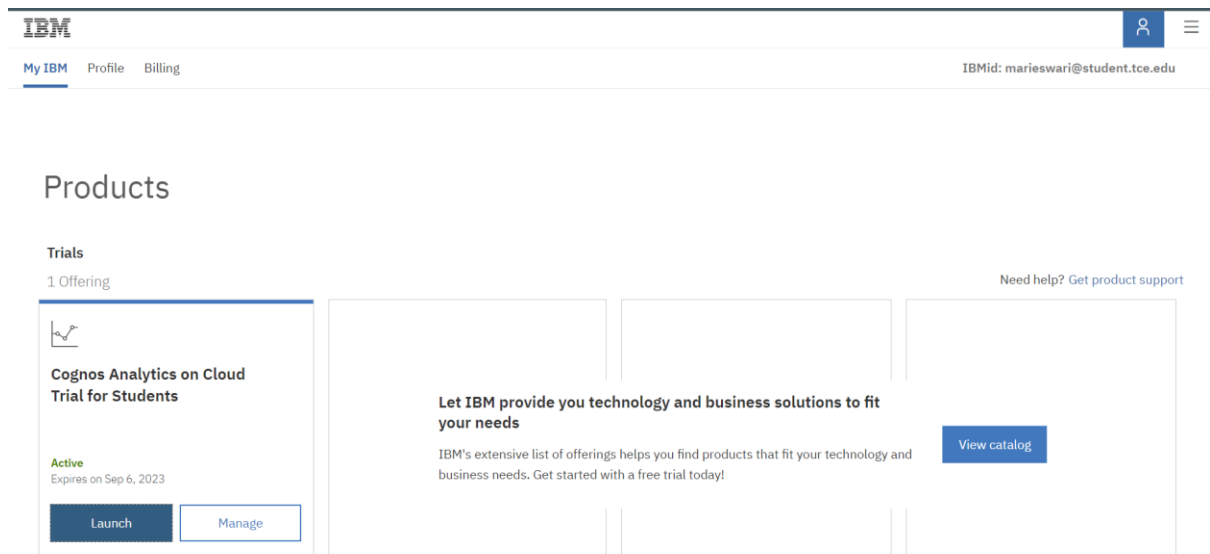


Assignment - 1

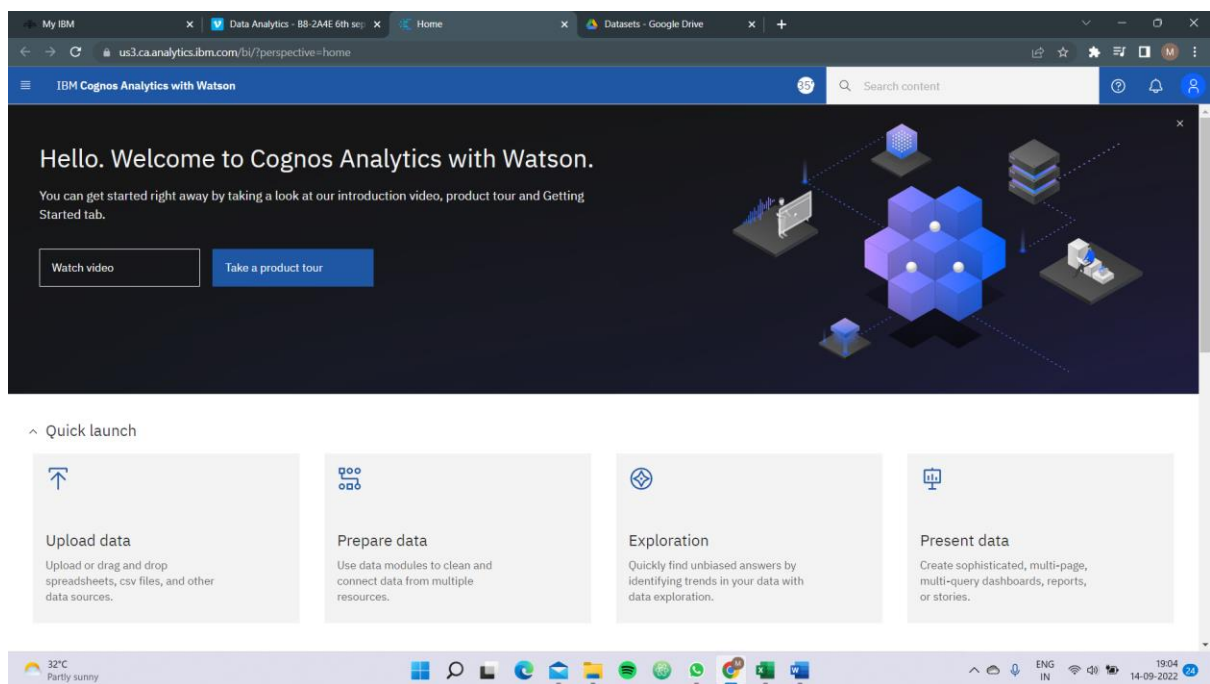
The case of 50 Start-up's

Dataset: [50-Startup-Dataset](#)

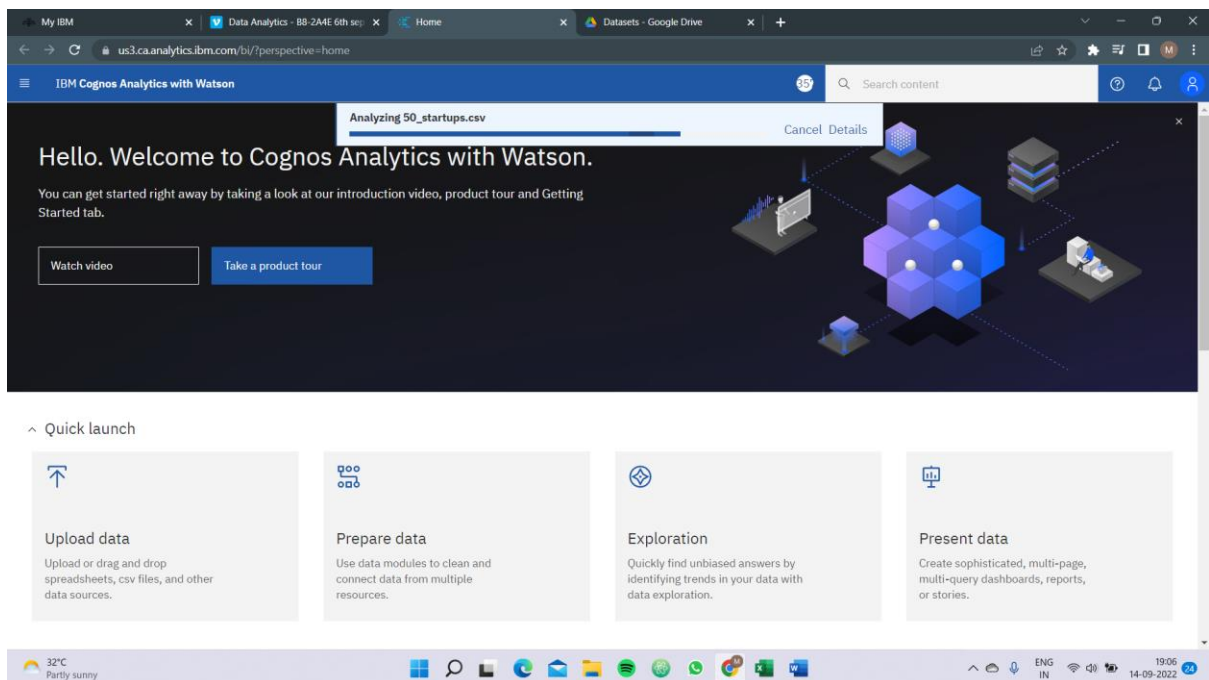
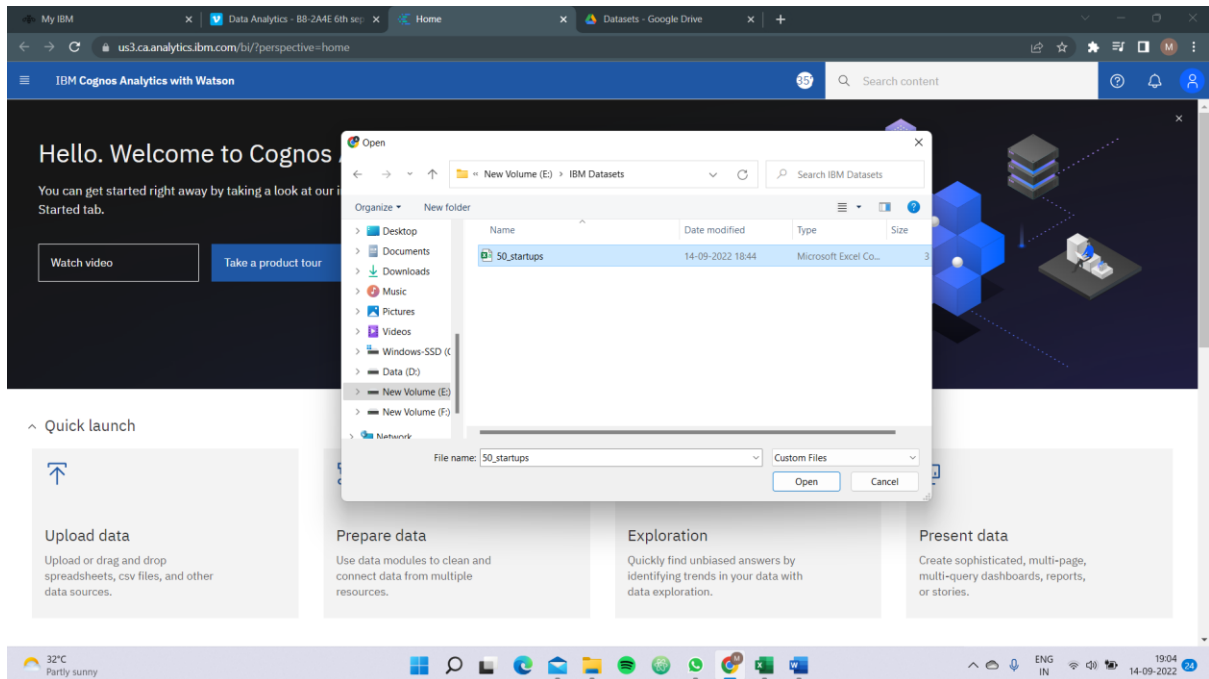
- ➔ Login to the IBM Cognos Analytics
- ➔ Select Launch from the product



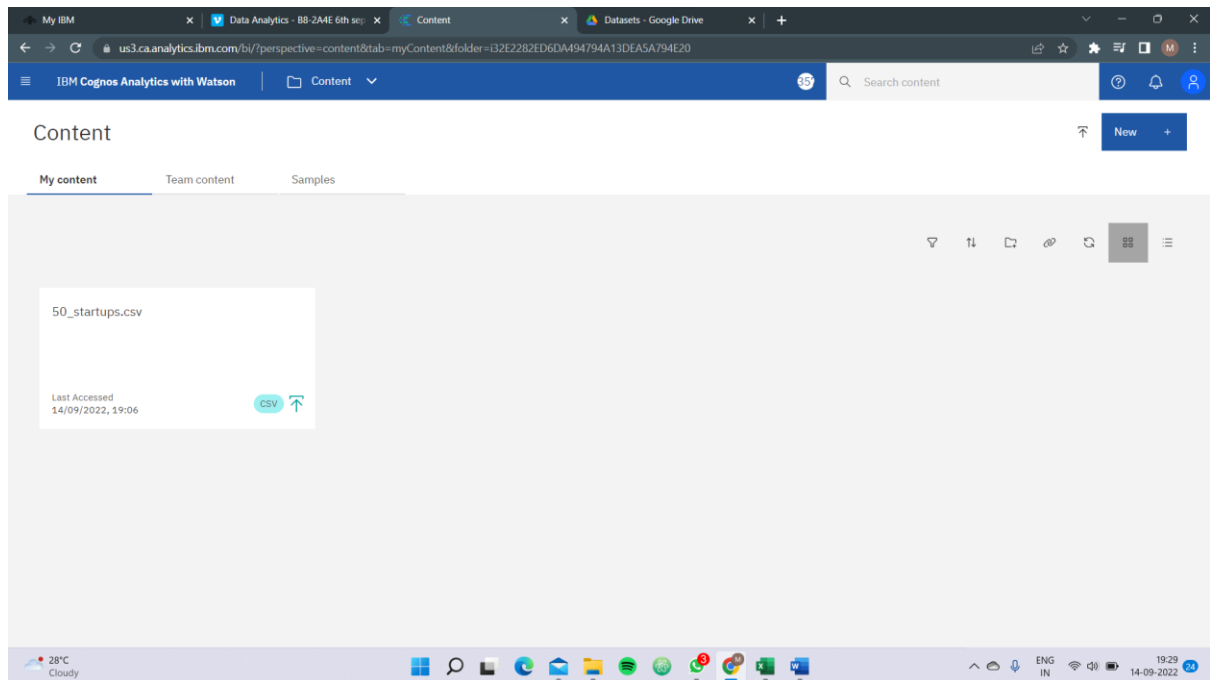
- ➔ Four main operations get displayed



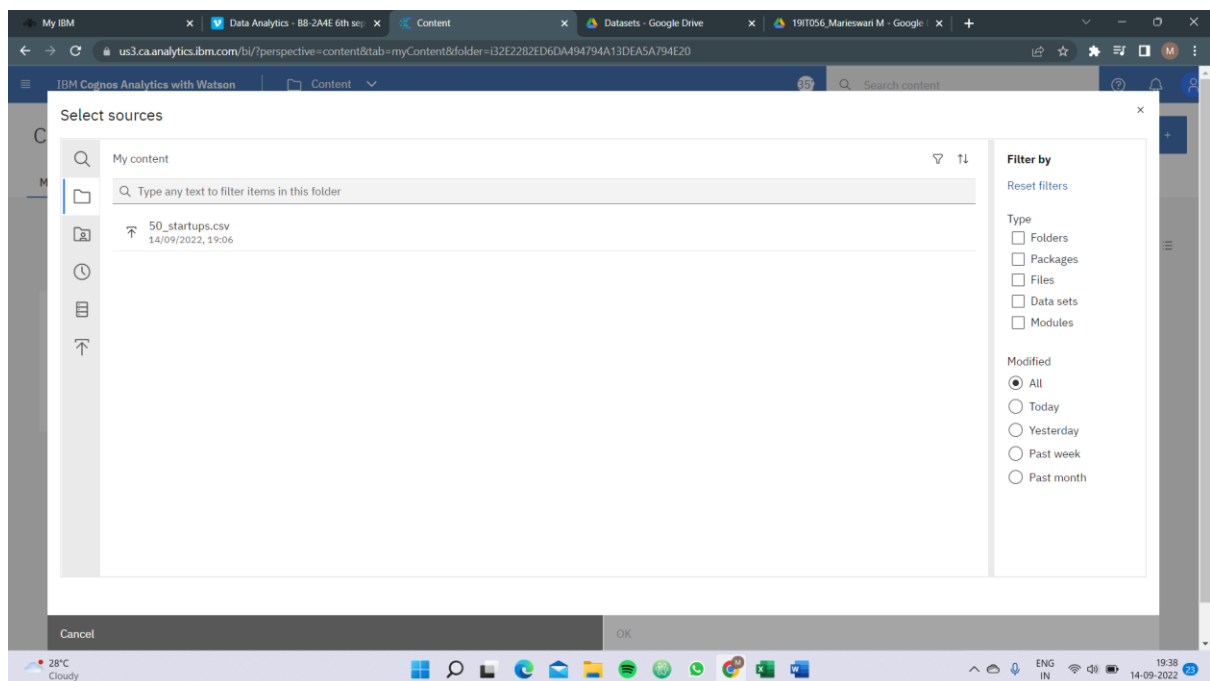
➔ Upload the 50 startup dataset from the local system



- ➔ The uploaded dataset can be viewed in My Content page
- ➔ Or you can also upload the dataset directly in my content page



- ➔ Dataset get displayed with date and time



DATA PREPARATION

#- Unique values

Abc – Text values

Scale- Measure(numerical value)

Map mark – Map value

➔ Click +new – data module – select 50 startup module

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane shows a search bar and a list of modules. The '50_startups.csv' module is selected. The main area displays a grid view of the data. The grid has columns for Row Id, R&D Spend, Administration, Marketing Spend, State, and Profit. The data is as follows:

Row Id	R&D Spend	Administration	Marketing Spend	State	Profit
1	165349.2	136897.8	471784.1	New York	192261.83
2	162597.7	151377.59	443898.53	California	191792.06
3	153441.51	101145.55	407934.54	Florida	191050.39
4	144372.41	118671.85	383199.62	New York	182901.99
5	142107.34	91391.77	366168.42	Florida	166187.94
6	131876.9	99814.71	362861.36	New York	156991.12
7	134615.46	147198.87	127716.82	California	156122.51
8	130298.13	145530.06	323876.68	Florida	155752.6
9	120542.52	148718.95	311613.29	New York	152211.77
10	123334.88	108679.17	304981.62	California	149759.96
11	101913.08	110594.11	229160.95	Florida	146121.95
12	100671.96	91790.61	249744.55	California	144259.4
13	93863.75	127320.38	249839.44	Florida	141585.52
14	91992.39	135495.07	252664.93	California	134307.35

➔ Clean the data for attribute state:-

➔ Replace Florida with null value

The screenshot shows the IBM Cognos Analytics interface with the 'Clean - State' dialog box open. The dialog box has the following sections:

- Whitespace**: ☒ Trim leading and trailing whitespace
- Convert case to**: ☐ UPPERCASE ☐ lowercase ☒ Do not change
- Return a substring of characters**: Start (dropdown), Length (dropdown), Preview (This is a preview)
- NULL values**: ☒ Replace this value with NULL (Florida) ☐ Replace NULL values with (Empty string)

The 'Clean' button is highlighted in blue. The background shows the same data module as the previous screenshot.

Data module

Search

- New data module
- Navigation paths
- 50_startups.csv
 - # Row Id
 - R&D Spend
 - Administration
 - Marketing Spend
 - State
 - Profit

R&D Spend	Administration	Marketing Spend	State
165349.2	136897.8	471784.1	New York
162597.7	151377.59	443898.53	California
153441.51	101145.55	407934.54	Null
144372.41	118671.85	383199.62	New York
142107.34	91391.77	366168.42	Null
131876.9	99814.71	362861.36	New York
134615.46	147198.87	127716.82	California
130298.13	145530.06	323876.68	Null
120542.52	148718.95	311613.29	New York
123334.88	108679.17	304981.62	California
101913.08	110594.11	229160.95	Null
100671.96	91790.61	249744.55	California
93863.75	127320.38	249839.44	Null
91097.39	135495.07	252664.93	California

Properties

General

Label: State

Hide from users: ☐

Expression: [View or edit](#)

Usage: Identifier

Aggregate: None

Data type: Text

Represents: Geographic location

City:

Description:

Comments:

➔ Again replacing Null with Los Angeles

Clean - State

Whitespace

☒ Trim leading and trailing whitespace

Convert case to

☐ UPPERCASE ☐ lowercase ☒ Do not change

Return a substring of characters

Start: Length:

Preview

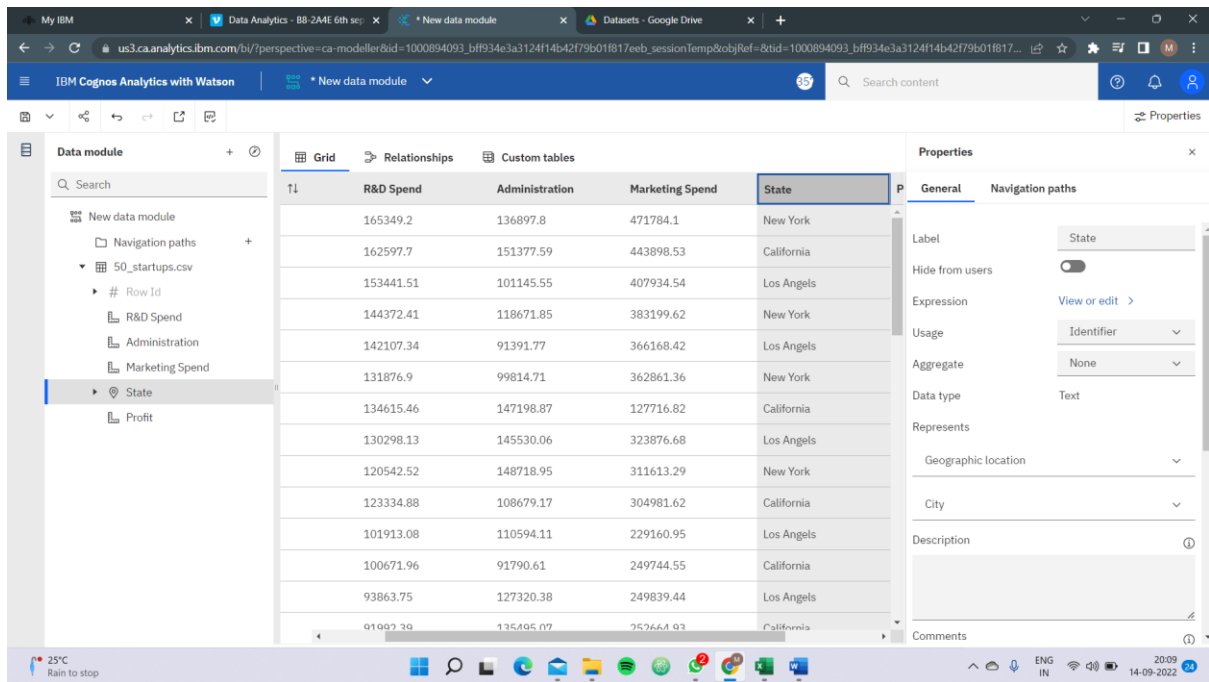
This is a preview

NULL values

☒ Replace this value with NULL Florida

☒ Replace NULL values with Los Angeles

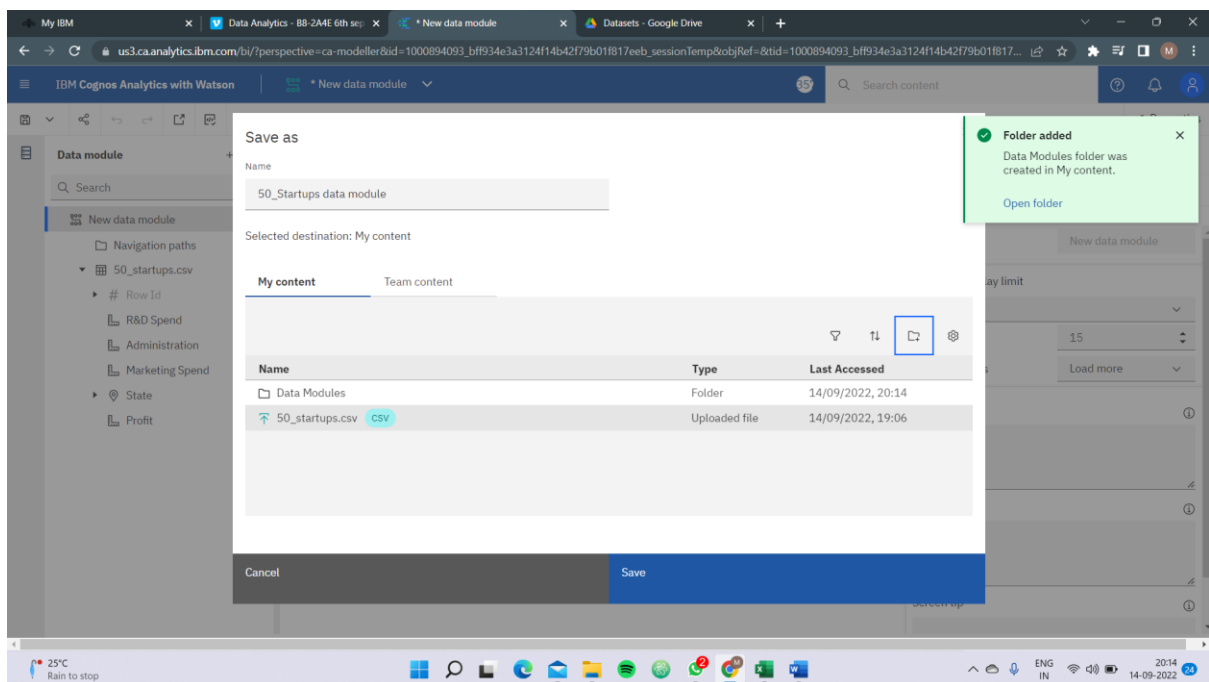
Cancel Clean



The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane shows a tree structure with '50_startups.csv' expanded, showing fields like '# Row Id', 'R&D Spend', 'Administration', 'Marketing Spend', 'State', and 'Profit'. The 'State' field is selected. The main grid view displays data for various states, including New York, California, and Los Angeles. The 'Properties' pane on the right shows the 'General' tab for the 'State' field, with options like 'Label', 'Hide from users', 'Expression', 'Usage', 'Aggregate', 'Data type', 'Represents', 'Geographic location', 'City', and 'Description'.

R&D Spend	Administration	Marketing Spend	State
165349.2	136897.8	471784.1	New York
162597.7	151377.59	443898.53	California
153441.51	101145.55	407934.54	Los Angeles
144372.41	118671.85	383199.62	New York
142107.34	91391.77	366168.42	Los Angeles
131876.9	99814.71	362861.36	New York
134615.46	147198.87	127716.82	California
130298.13	145530.06	323876.68	Los Angeles
120542.52	148718.95	311613.29	New York
123334.88	108679.17	304981.62	California
101913.08	110594.11	229160.95	Los Angeles
100671.96	91790.61	249744.55	California
93863.75	127320.38	249839.44	Los Angeles
91097.39	135495.07	252664.93	California

➔ To save the module in newly created folder



The screenshot shows the 'Save as' dialog box in IBM Cognos Analytics. The 'Name' field contains '50_Startups data module'. The 'Selected destination' is 'My content'. The dialog box shows a list of items in 'My content': 'Data Modules' (Folder) and '50_startups.csv' (Uploaded file). A green notification bubble in the top right corner says 'Folder added' and 'Data Modules folder was created in My content.' with an 'Open folder' link. The 'Save' button is highlighted in blue.

Name	Type	Last Accessed
Data Modules	Folder	14/09/2022, 20:14
50_startups.csv	Uploaded file	14/09/2022, 19:06

DATA EXPLORATION

The screenshot shows the IBM Cognos Analytics interface. A dialog box titled "Add a data source to explore" is open, displaying a table of available data sources. The table has columns for Name, Type, and Last Accessed. The data sources listed are "Data Modules" (Folder) and "50_startups.csv" (Uploaded file). The "50_startups.csv" file is highlighted. The dialog box has "Cancel" and "Add" buttons at the bottom.

Name	Type	Last Accessed
Data Modules	Folder	14/09/2022, 20:14
50_startups.csv	Uploaded file	14/09/2022, 19:06

➔ Exploring recommended attribute profit

The screenshot shows the IBM Cognos Analytics interface with the "Explore data relationships" view. The view displays a relationship diagram for the "50_startups.csv" dataset. The diagram shows three nodes: "R&D Spend", "Profit", and "Marketing Spend". A curved line connects "R&D Spend" and "Marketing Spend", with a tooltip indicating "Profit - Marketing Spend Strength: 61%". The "Profit" node is highlighted. The right sidebar shows a "Select a visualization" panel with a "Profit" visualization selected, displaying a value of "5.6M Profit".

Explore data relationships

50_startups.csv

Reset to original

Profit - Marketing Spend Strength: 61%

Profit

Marketing Spend

R&D Spend

Select single or multiple nodes to see visualizations.

Relationship diagram ①

10% 100%

Select a visualization

Explore visualizations related to "Profit"

Profit

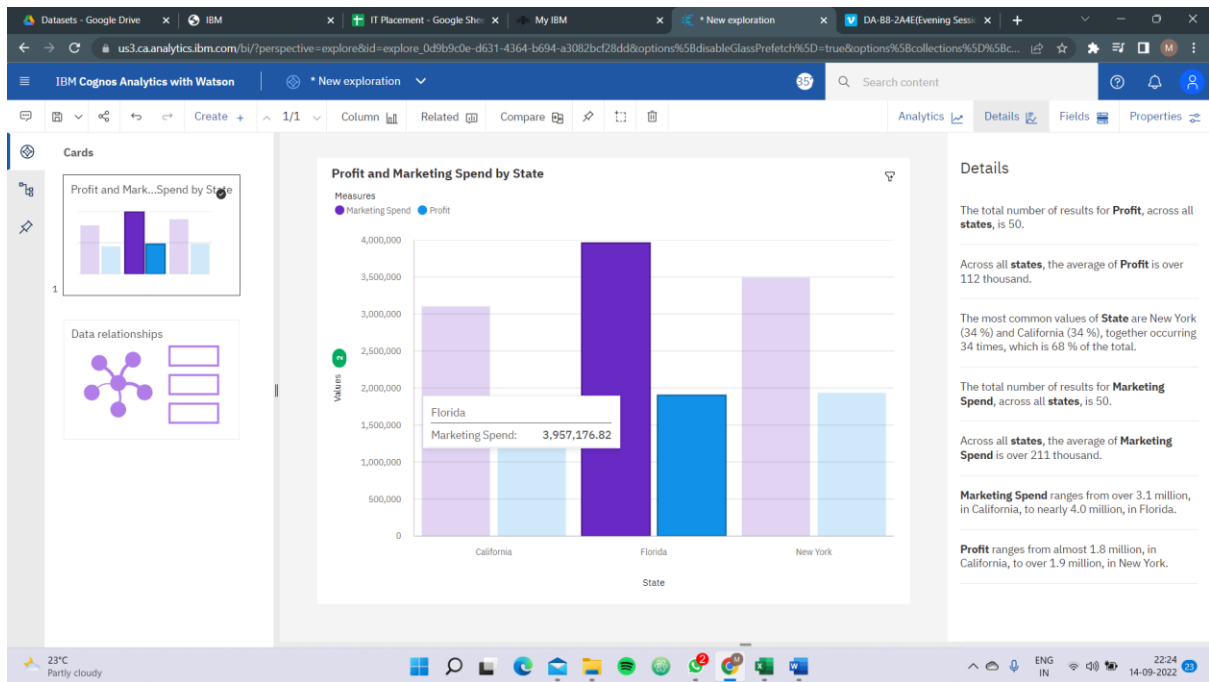
5.6M Profit

Add +

Profit

Add +

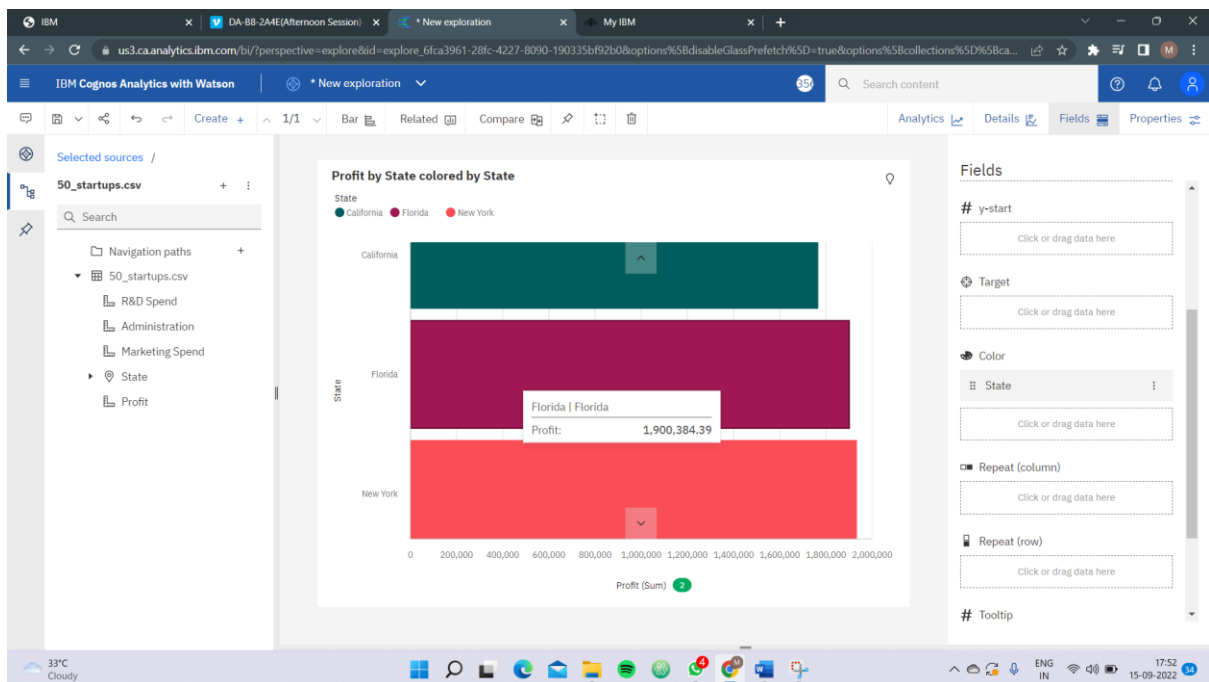
Administration and Profit for State regions



VISUALIZATION

1.Bar Graph

Profit by state



➔ Profit -> properties -> average profit

The screenshot shows the IBM Cognos Analytics interface. A 'Properties' dialog box is open for the 'Profit' field. The dialog has the following fields:

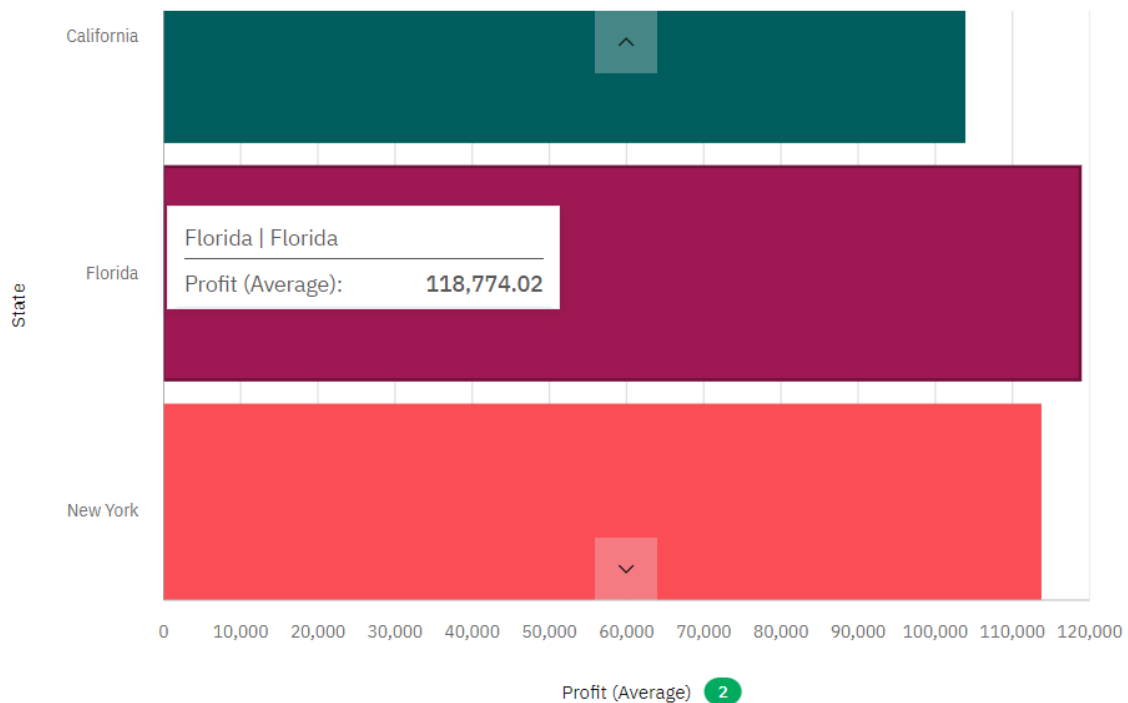
- Label: Profit
- Description: (empty)
- Usage: Measure
- Aggregate: Average
- Data type: Decimal
- Represents: (empty)
- Default: (empty)

The 'Close' button is at the bottom right of the dialog. In the background, the 'Fields' panel shows 'Profit' and 'State' as available fields. The main view shows a bar chart titled 'Profit by State colored by State'.

Profit by State colored by State

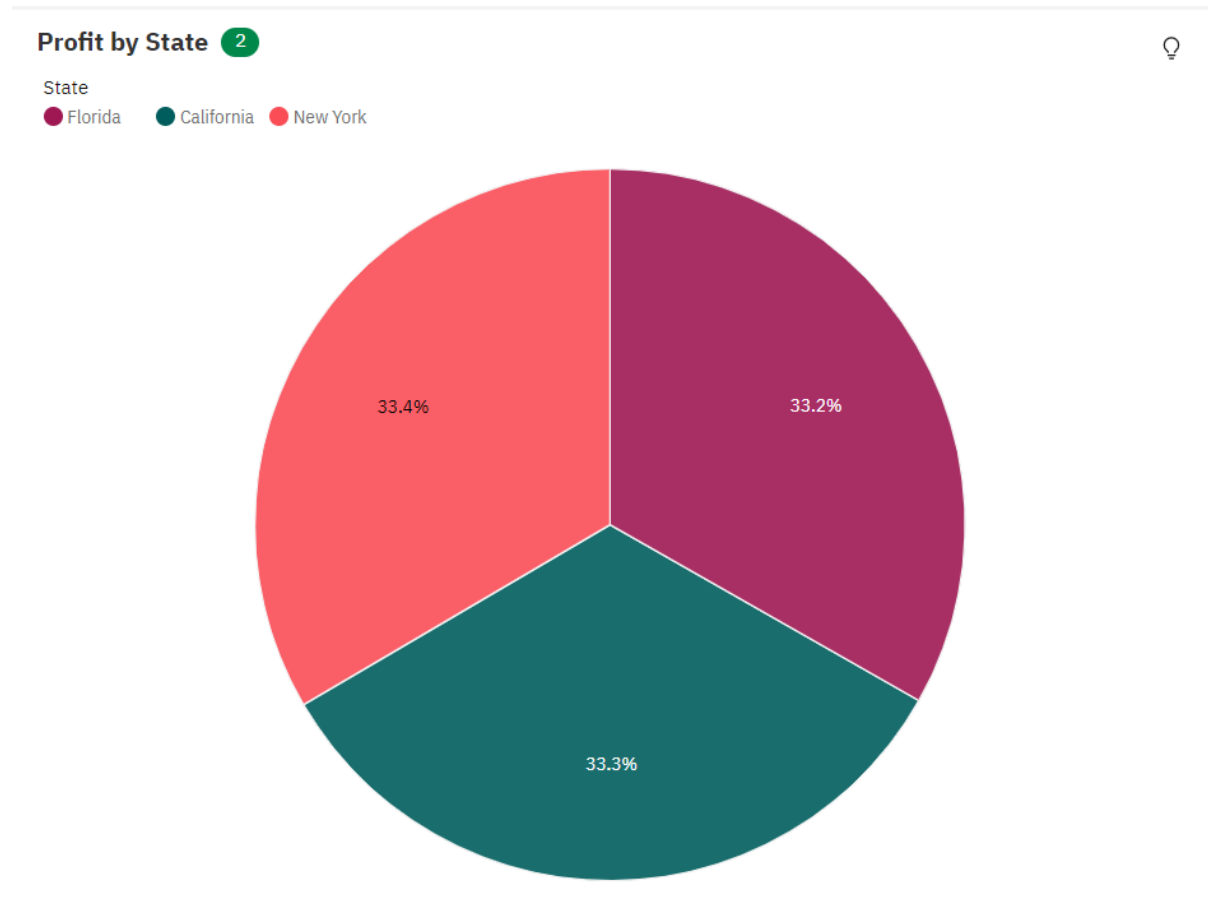
State

California Florida New York



2. Pie Chart

Profit by state



IBM Cognos Analytics with Watson

* New exploration

Search content

Analytics Details Fields Properties

Selected sources /

50_startups.csv

Navigation paths

- 50_startups.csv
 - R&D Spend
 - Administration
 - Marketing Spend
 - State
 - Profit

Profit by State

State

- Florida

Properties

Label: Profit

Description:

Usage: Measure

Aggregate: Maximum

Data type: Decimal

Represents:

Default:

Close

Fields

Segments*

State

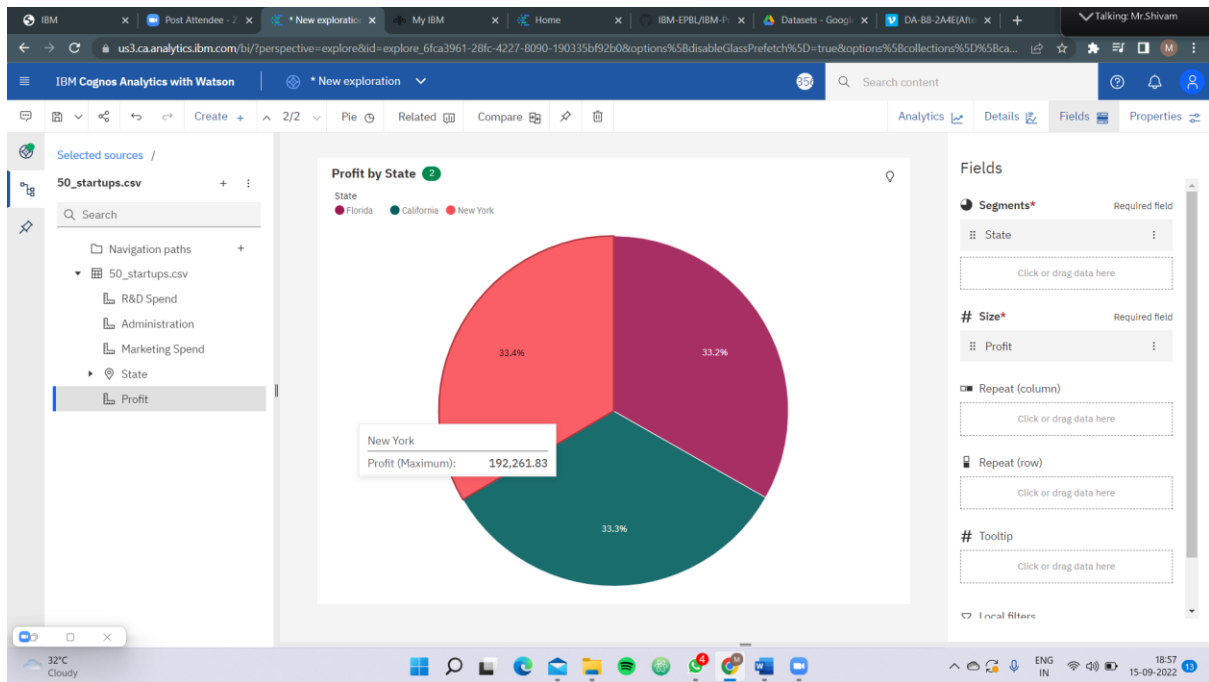
Size*

Profit

Repeat (column)

Repeat (row)

Tooltip

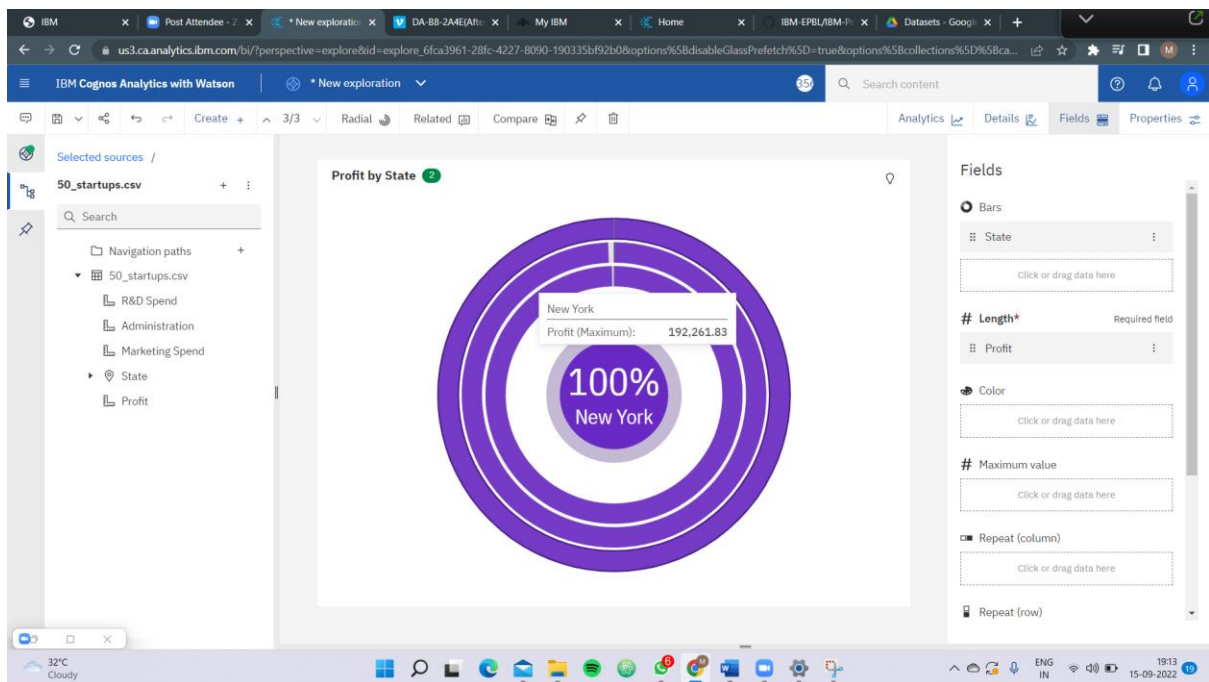


3.Crosstab

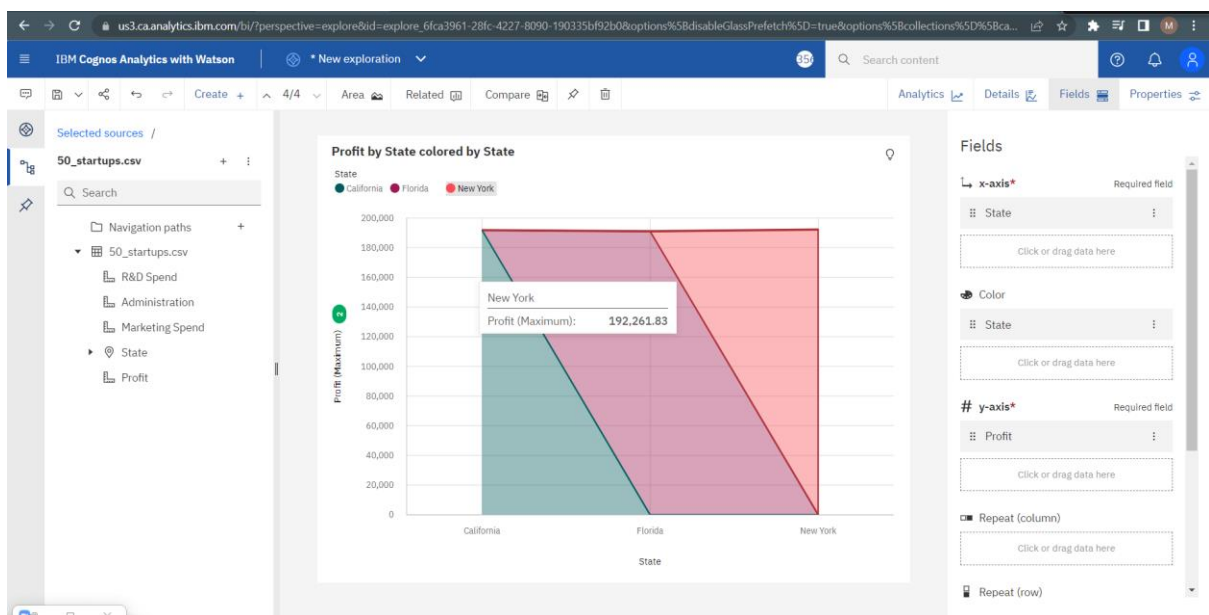
The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Selected sources' panel is the same as in the previous screenshot. The main area displays a crosstab titled 'Profit for State'. The crosstab has a single column 'Profit' and four rows: 'California', 'Florida', 'New York', and 'Summary'. The values for each row are: California (191,792.06), Florida (191,050.39), New York (192,261.83), and Summary (192,261.83). On the right, the 'Fields' panel shows 'Columns' with a 'Click or drag data here' prompt, 'Rows' with 'State' as a required field, and '# Values*' with 'Profit' as a required field. Below these are sections for 'Local filters' and 'Repeat (column)', each with a 'Click or drag data here' prompt. The bottom status bar shows '32°C Cloudy' and the date '15-09-2022'.

	Profit
California	191,792.06
Florida	191,050.39
New York	192,261.83
Summary	192,261.83

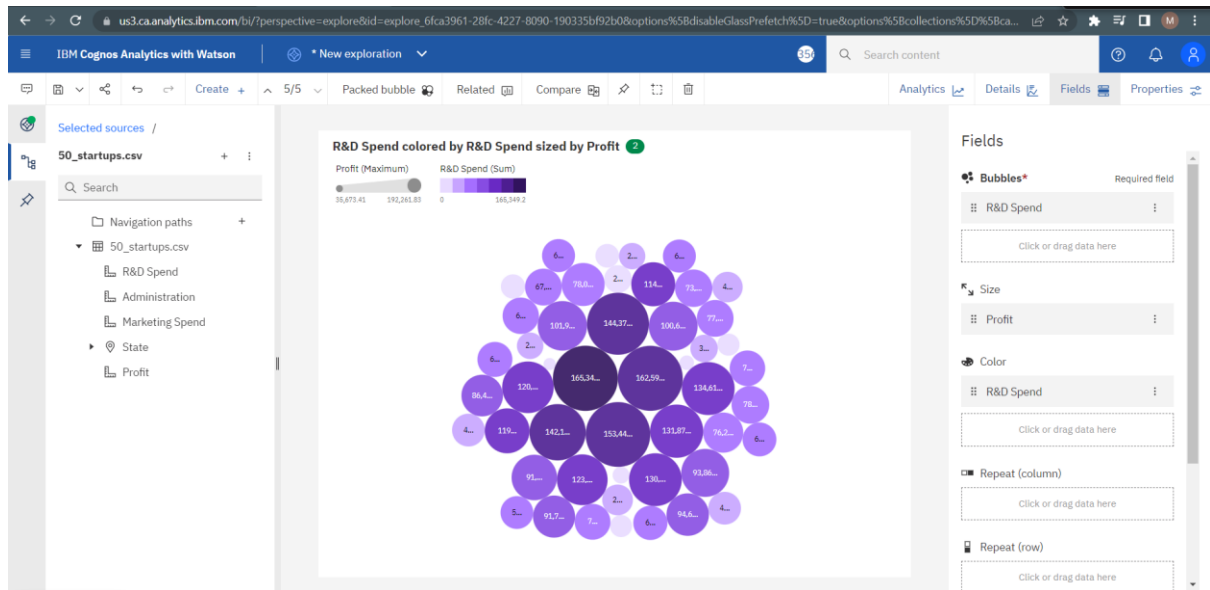
4. Radial



5. Area



6. Packed Bubble



7. Line graph

