Vishal

# A NEW HINT TO TRANSPORTATION  - ANALYSIS OF THE NYC BIKE SHARE SYSTEM
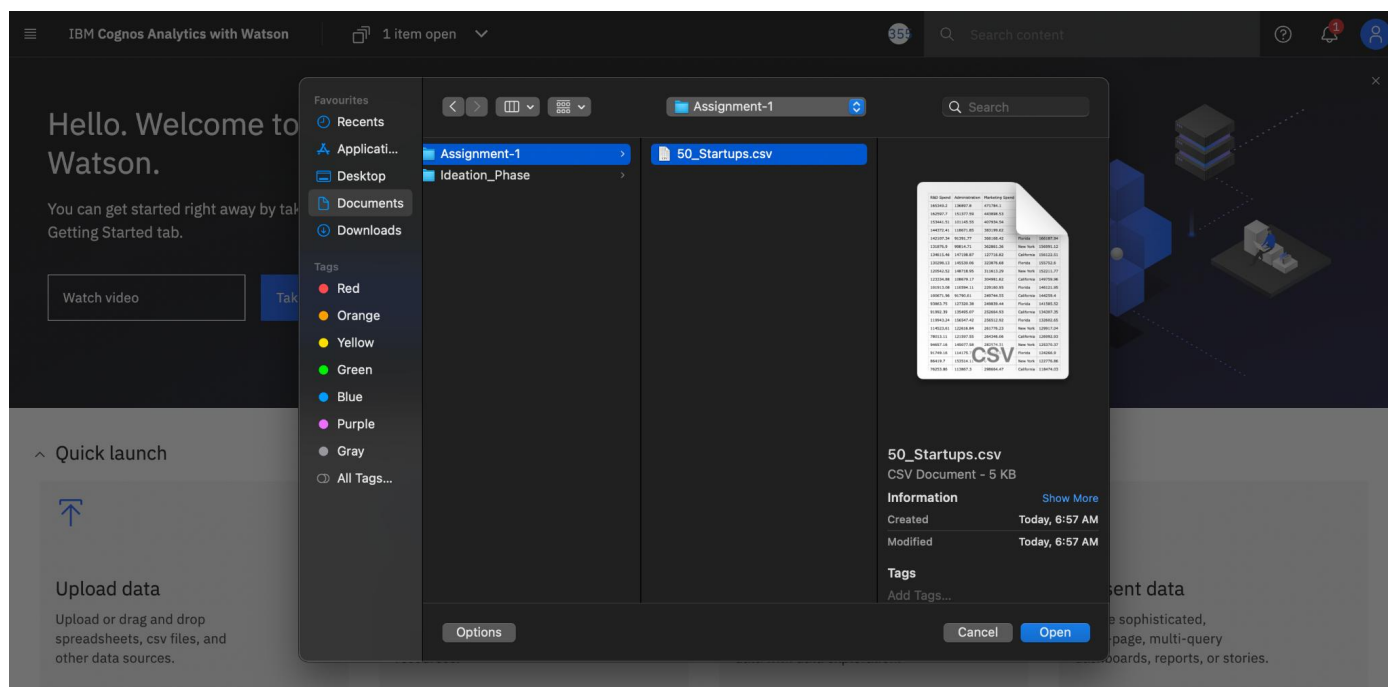
## TASK:

Upload the dataset to Cognos Analytics, Explore and Visualize the 50-startups dataset.
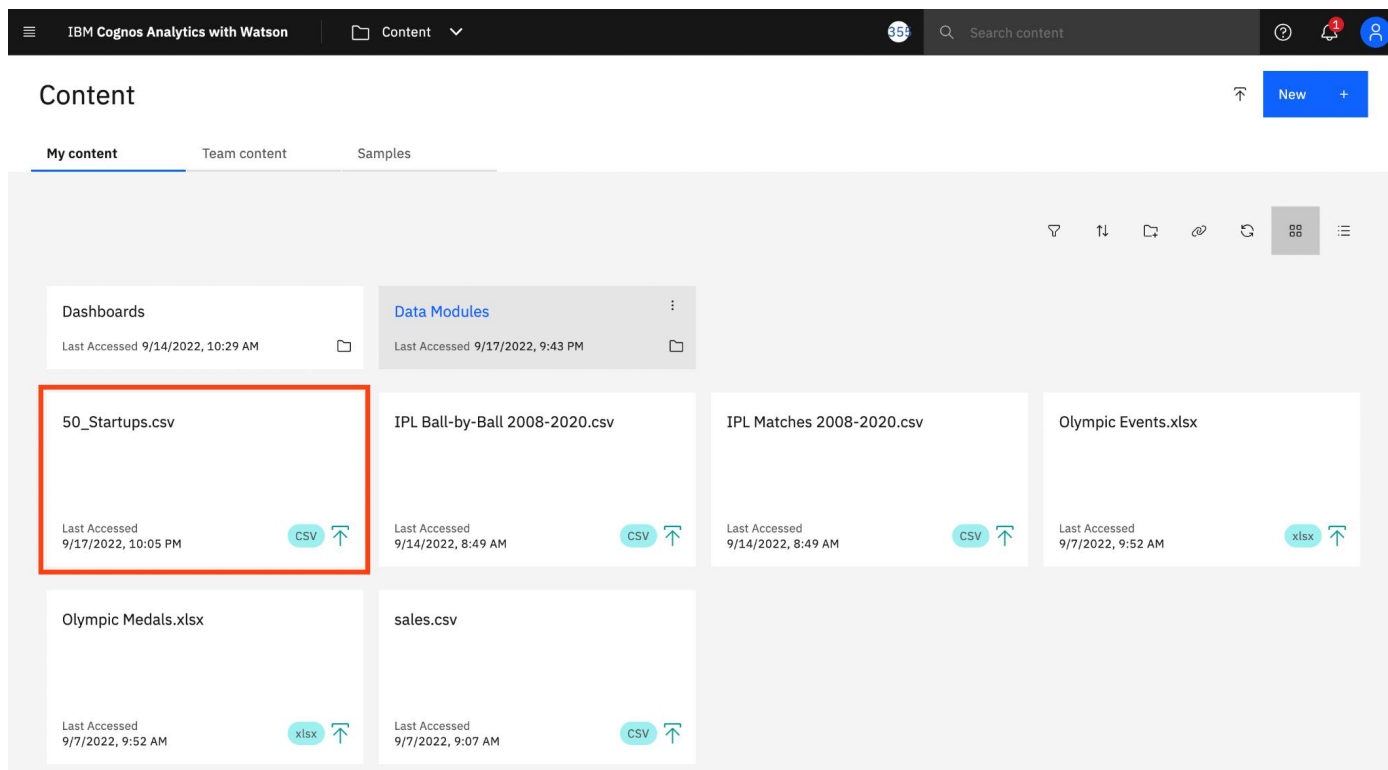
## DATASET USED:

This particular dataset holds data from 50 startups in New York, California, and Florida. The
features in this dataset are **R&D spending**, **Administration Spending**, **Marketing Spending**, and **Location features**, while the target variable is: **Profit**.

1. **R&D spending**: The amount which startups are spending on Research and development.
2. **Administration spending**: The amount which startups are spending on the Admin panel.
3. **Marketing spending**: The amount which startups are spending on marketing strategies.
4. **State**: To which state that particular startup belongs.
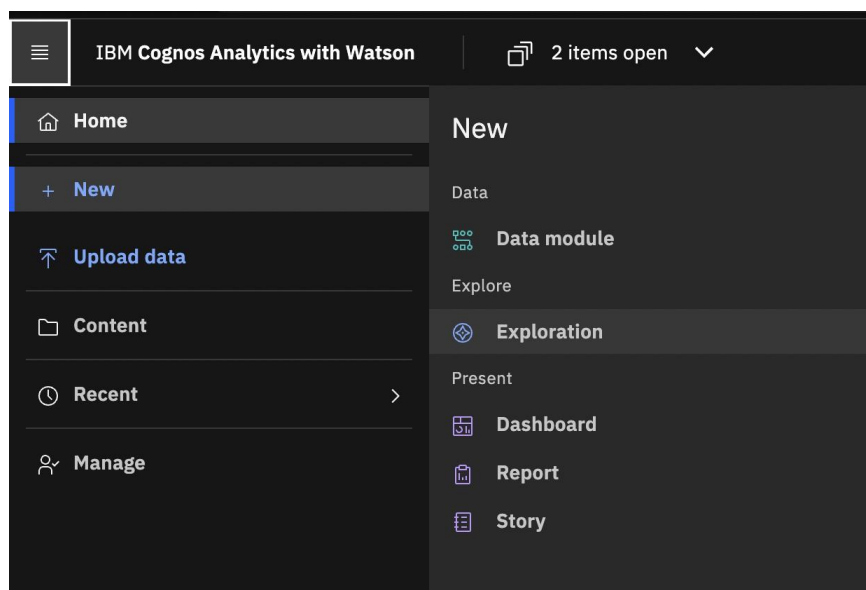5. **Profit**: How much profit that particular startup is making.

## SOLUTION:

As highlighted by the red box, the dataset *50_Startups.csv* was successfully **uploaded** onto the IBM Cognos platform.

**<u>EXPLORATION AND VISUALIZATION OF THE DATASET:</u>**

As a standard step for exploration and visualization, A new exploration was created so that the dataset can be analyzed and visualized to provide further insights.

The data source was then added to carry out the exploration.
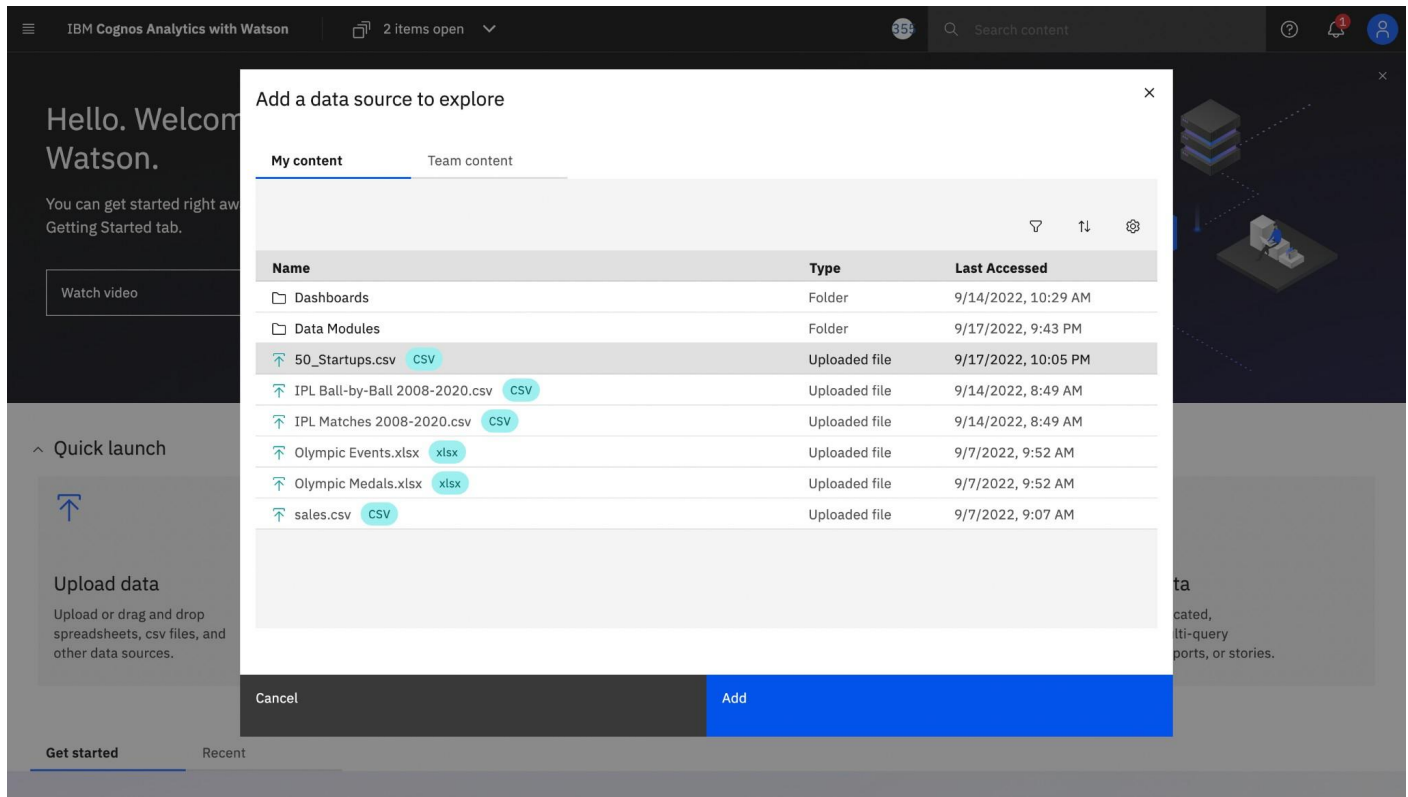


In order to decide which visualizations to create, the data was first analyzed and the features understood. The grid data was accessed using the **Prepare Data** option.

## Visualization #1:

**Profit by State** 4

State
● California  ● Florida  ● New York

3,841,622.84

4,397,455.81

4,021,487.43

This Pie chart visualization depicts the total profit earned by startups belonging to each state present in the Dataset.

Fields

◐ **Segments** *        Required field

⠿ State                        ⋮

Click or drag data here

\# **Size** *          Required field

⠿ Profit                       ⋮

**Visualization #2:**
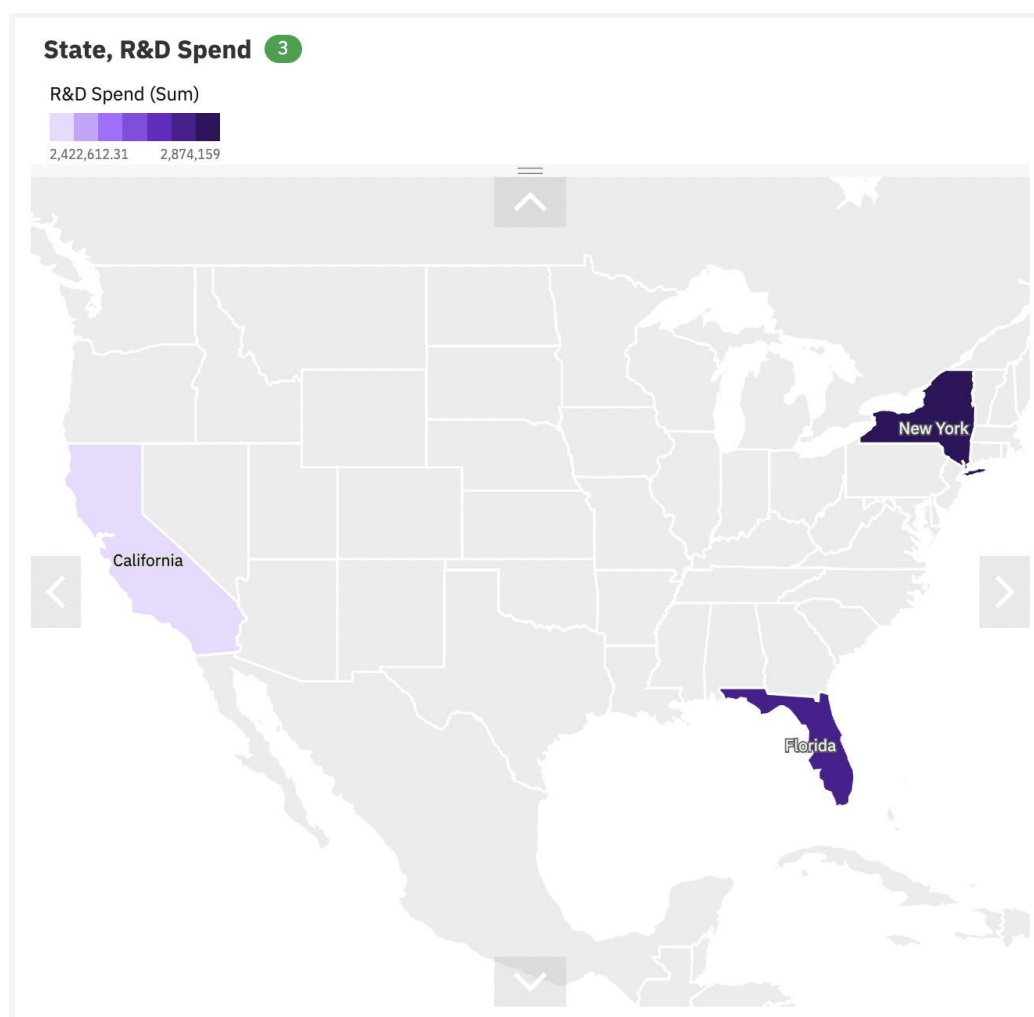


This Geospatial Map (Geolocation) visualization shows the State-wise startup expenditure towards Research and Development field.

The color gradient indicates the amount startups in the states spent, with the startups in New York spending the most (indicated by dark purple), while Calfornia spending the least in R&D (indicated by lavender).

# Fields

📍 **Regions***       Required field

⠿   State                                    ⋮

🔲 Regions heat

⠿   R&D Spend                          ⋮

## Visualization #3:



**Marketing Spend, Administration and R&D Spend by State**

Measures

● Marketing Spend  ● Administration  ● R&D Spend
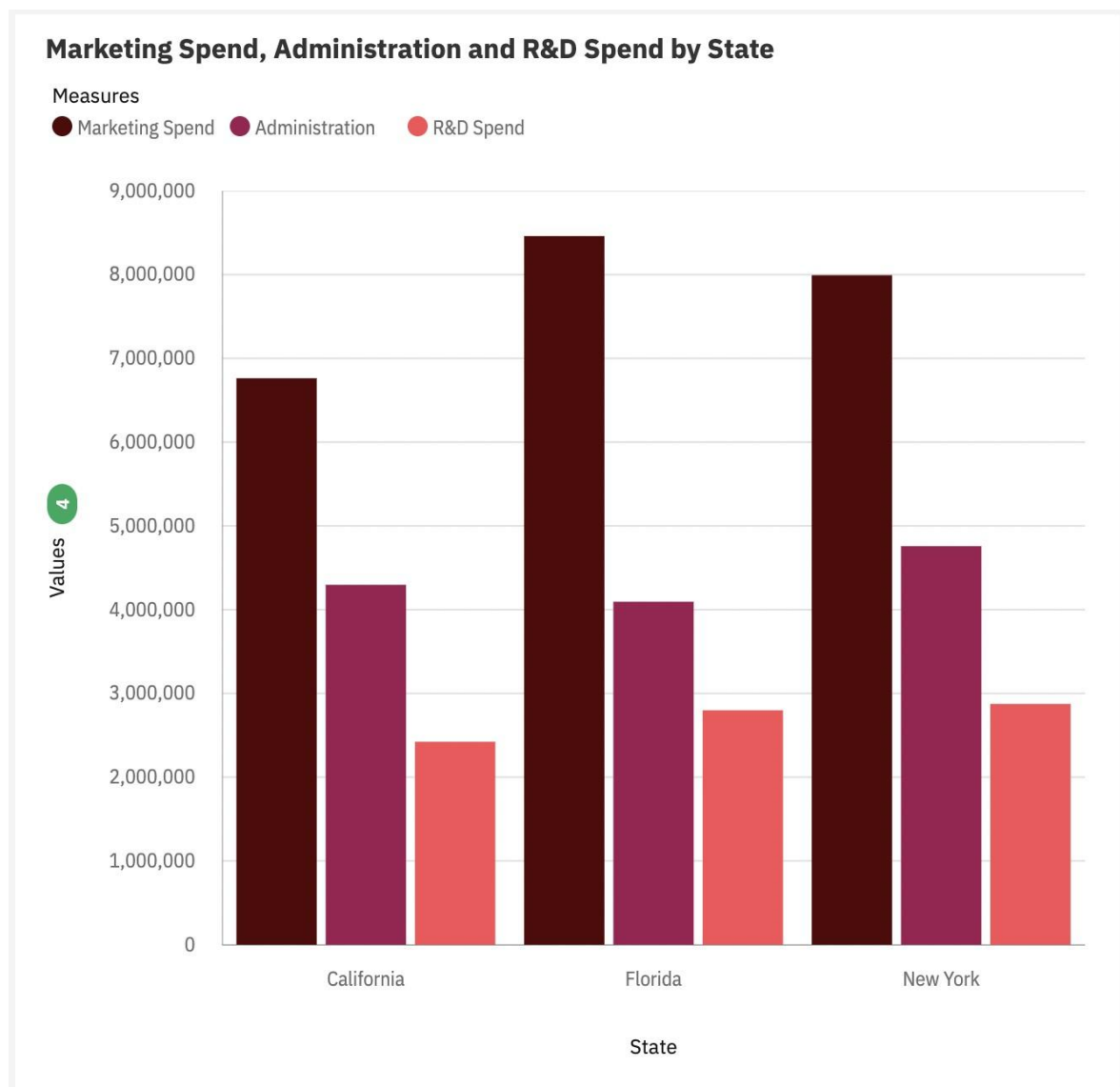
This visualization shows the category-wise expenditure by startups belonging to the states of California, Florida, and New York. This will instantly provide insight with regard to the amount of money spent for each category, bearing in mind the location of the startups.

## Fields

📊 Bars

⋮ State ⋮

Click or drag data here

\# **Length***  Required field

⋮ Marketing Spend ⋮

⋮ Administration ⋮

⋮ R&D Spend ⋮

Click or drag data here

## **Visualization #4:**



**Profit by Marketing Spend colored by State**

State
● California  ● Florida  ● New York
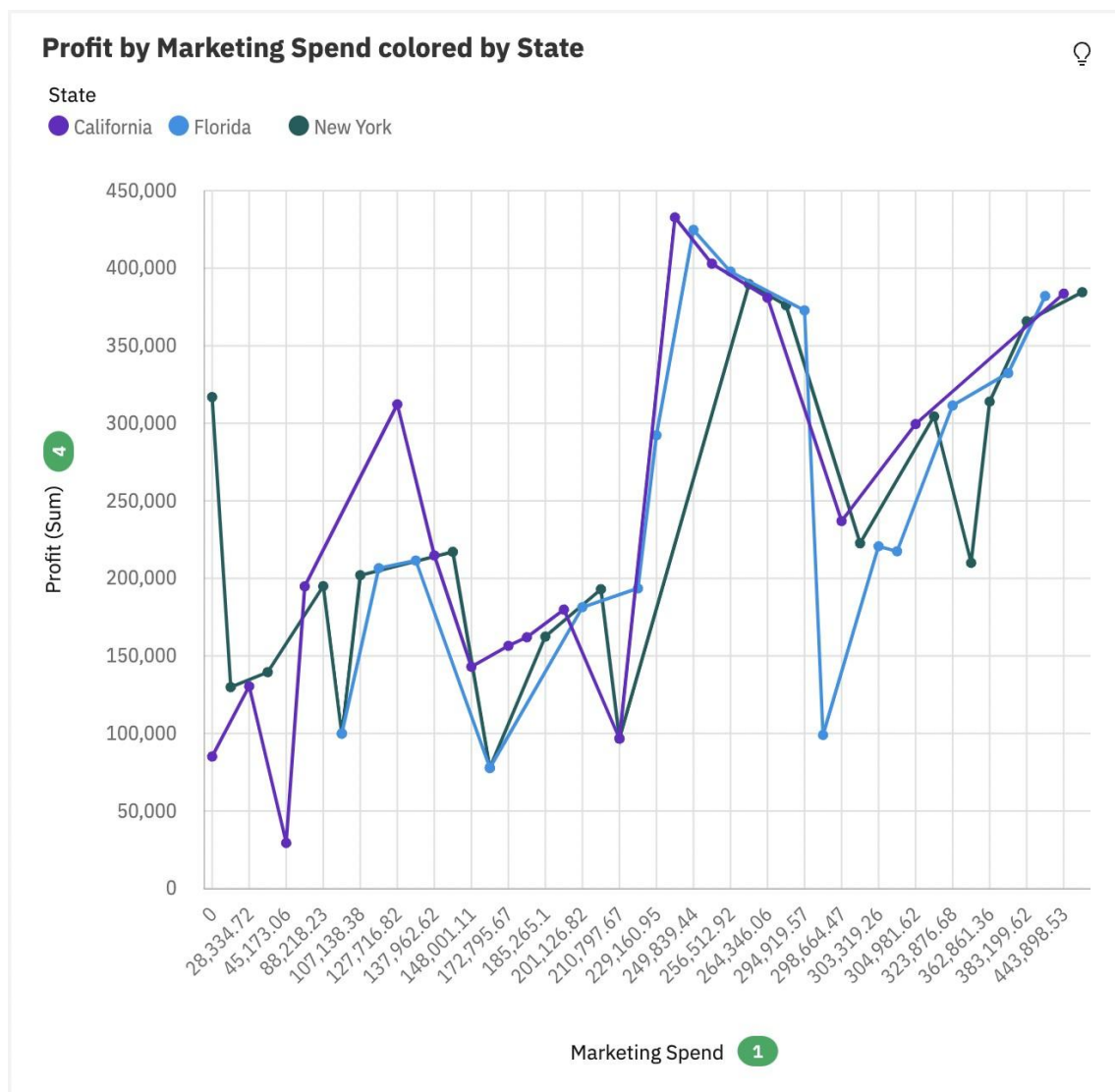
This visualization provides insight regarding the profit made by comparing it with the Marketing Spend - for the startups in all three states as indicated by different colored lines.

## Fields

⌐→ **x-axis***  Required field

⠿  Marketing Spend  ⋮

Click or drag data here

🎨 Color

⠿  State  ⋮

Click or drag data here

\# **y-axis***  Required field

⠿  Profit  ⋮

Click or drag data here

**Visualization #5:**



**Profit by Administration and State** 4

Profit (Sum)

29,362.8    432,778.2

State

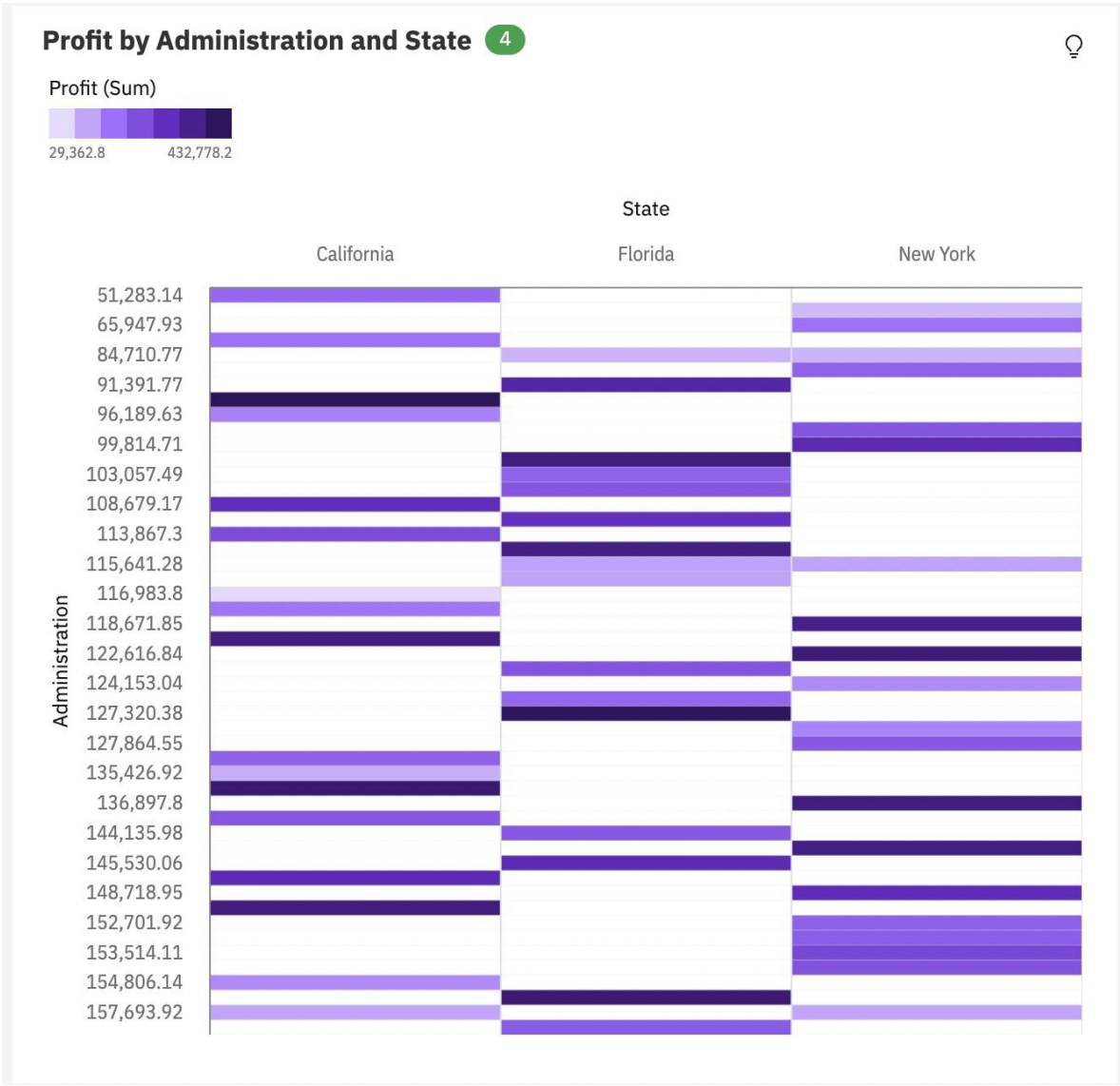|  | California | Florida | New York |
|---|---|---|---|
| 51,283.14 | | | |
| 65,947.93 | | | |
| 84,710.77 | | | |
| 91,391.77 | | | |
| 96,189.63 | | | |
| 99,814.71 | | | |
| 103,057.49 | | | |
| 108,679.17 | | | |
| 113,867.3 | | | |
| 115,641.28 | | | |
| 116,983.8 | | | |
| 118,671.85 | | | |
| 122,616.84 | | | |
| 124,153.04 | | | |
| 127,320.38 | | | |
| 127,864.55 | | | |
| 135,426.92 | | | |
| 136,897.8 | | | |
| 144,135.98 | | | |
| 145,530.06 | | | |
| 148,718.95 | | | |
| 152,701.92 | | | |
| 153,514.11 | | | |
| 154,806.14 | | | |
| 157,693.92 | | | |

This visualization represents a heatmap that bases its gradient color on the profit earned - Statewise with regards to Administration spending of companies in each state.

## Fields

**Rows**

⠿ Administration ⋮

Click or drag data here

▥ **Columns**

⠿ State ⋮

Click or drag data here

◼◻ **Heat**\* Required field

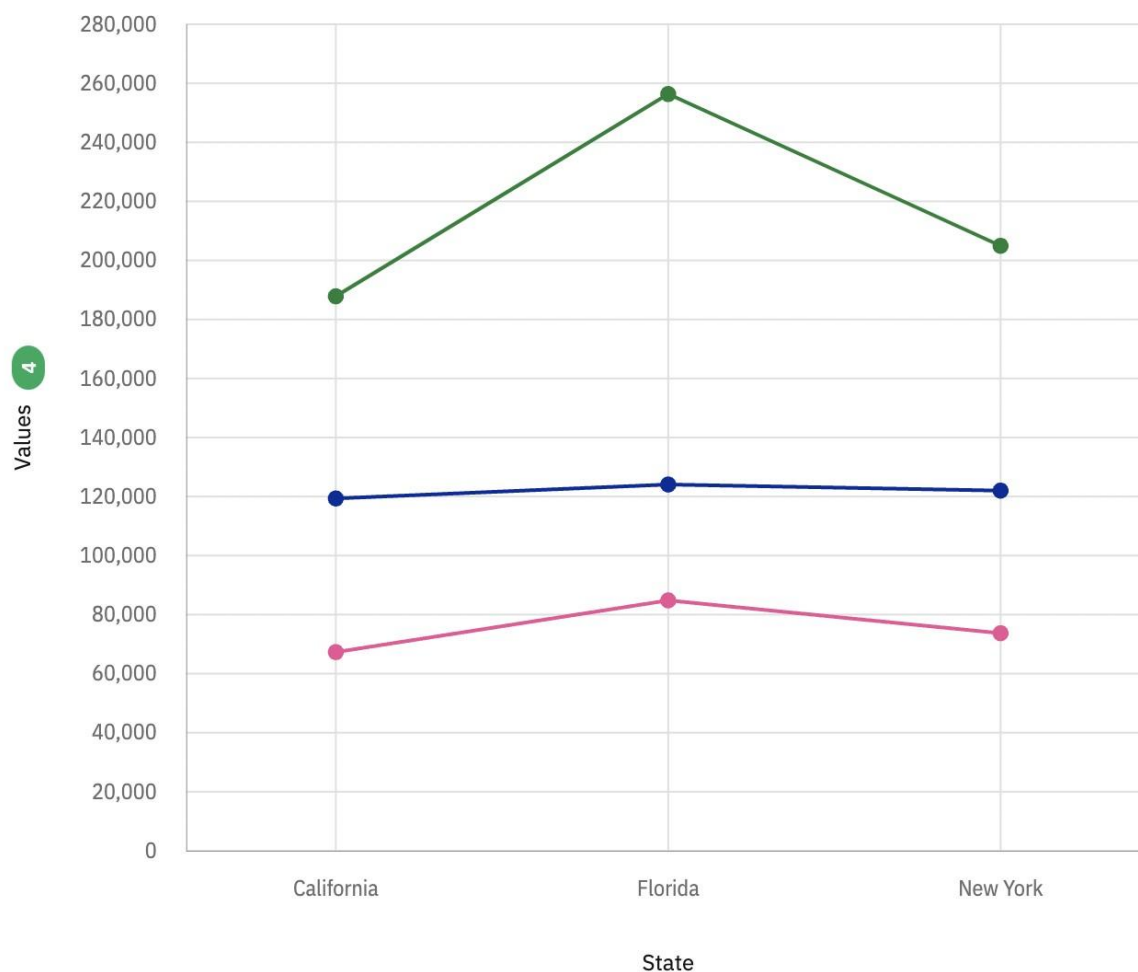⠿ Profit ⋮

**Visualization #6:**

**Marketing Spend, Administration and R&D Spend by State**

Measures
● Marketing Spend  ● Administration  ● R&D Spend



This visualization represents the average count of each expenditure for a startup - Marketing spend, Administration, and R&D Spend - mapped state-wise.

Fields

⌐ **x-axis** *          Required field

⠿ State                              ⋮

🎨 Color

⠿ Measures group (3)

Click or drag data here

# **y-axis** *          Required field

⠿ Marketing Spend                ⋮

⠿ Administration                  ⋮

⠿ R&D Spend                       ⋮

Click or drag data here