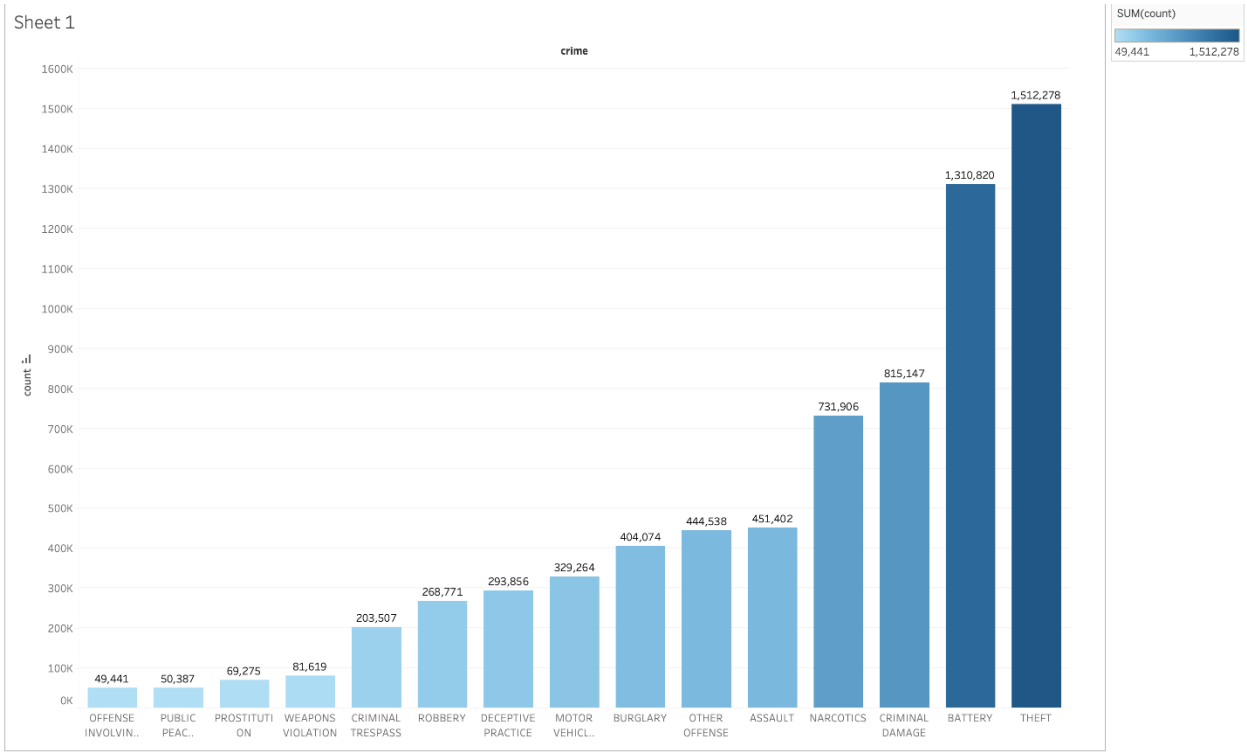
Tutorial for Tableau and PowerBI

Step 39: Creating Table - Top Crime Types Table in Tableau

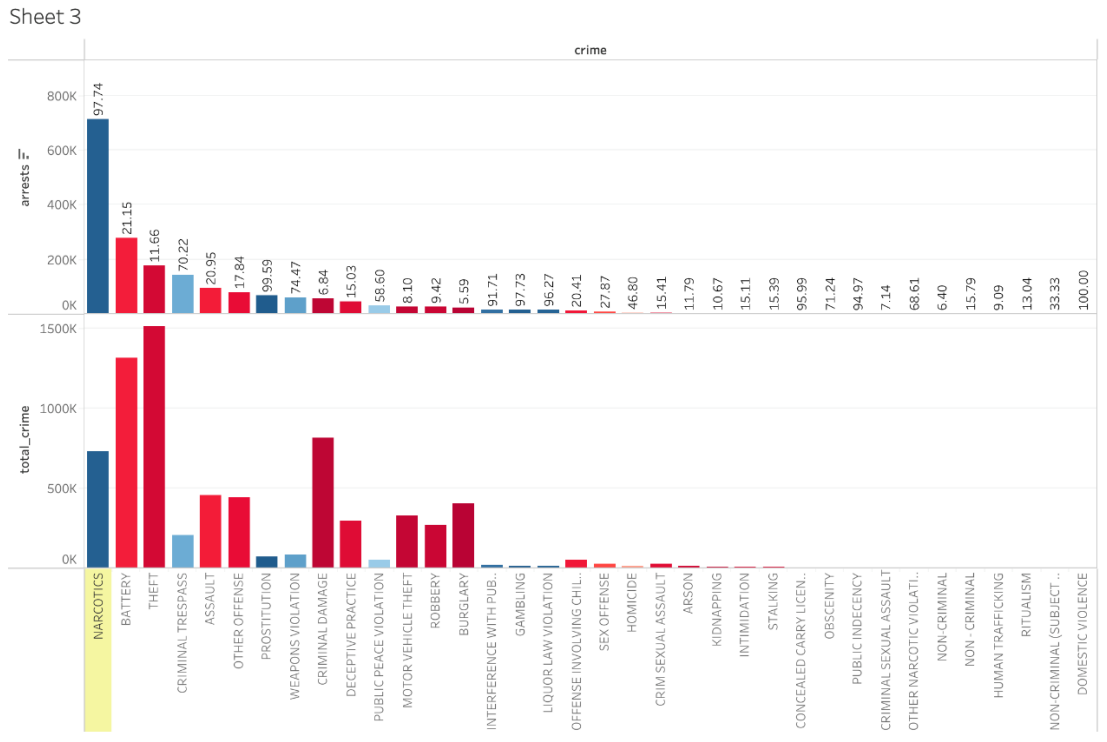
- **Purpose**: To create a visualization of the top crime types using Tableau.
- **Guide**:
    - Open Tableau.
    - Click on 'Text File' to link with CSV and text files.
    - Select 'top_crimes_types.csv' to open it.
    - Rename F1 to "crime" and F2 to "count".
    - Drag "crime" to Columns and "count" to Rows.
    - Click on "Sort Ascending" in the toolbar.
    - Drag and drop "crime" to the color option in the 'Marks' area to show a gradient.
    - Click on "Label" in the 'Marks' area, then click on "Show Mark Labels".
    - You should see something like this:



Step 40: Creating Visualization - Arrest Analysis Table in Tableau

- **Purpose**: To visualize the arrest analysis data using Tableau.
- **Guide**:

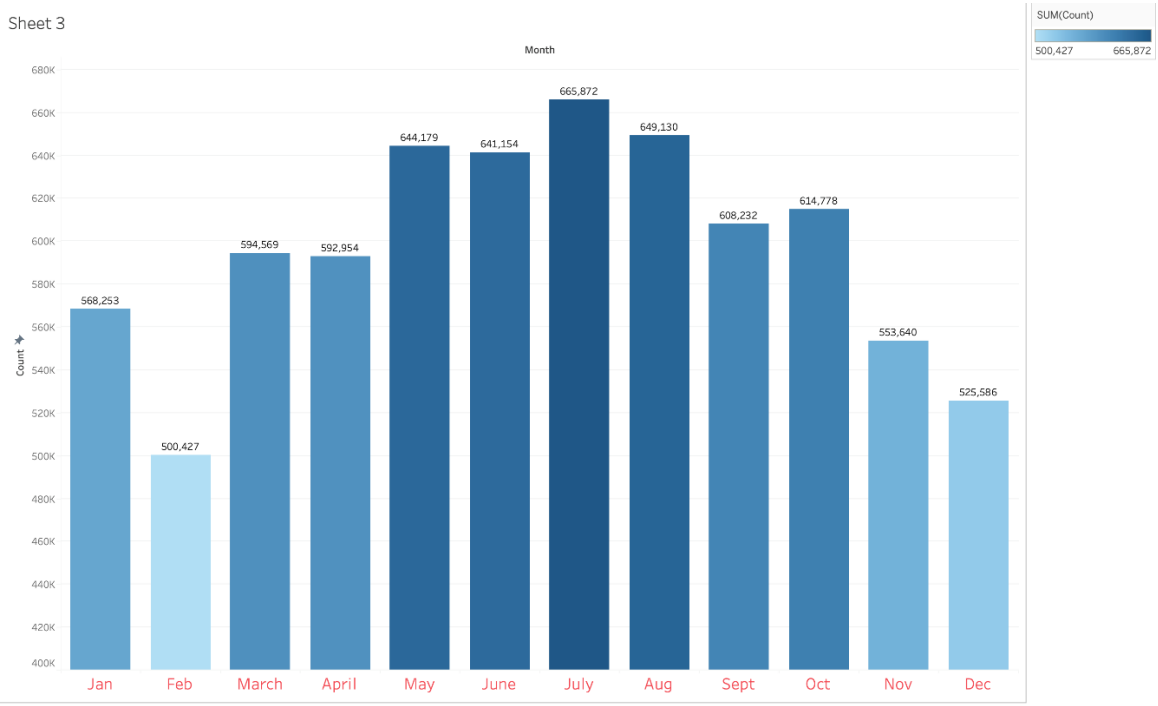
- Rename F1 to "crime", F2 to "arrests", F3 to "total_crime", and F4 to "arrest_percentage".
- Drag "crime" to Columns, "total_crime" to Rows, and "arrests" to Rows.
- Click on "Sort by Descending".
- Drag "arrest_percentage" to SUM(arrest) color.
- Drag "arrest_percentage" to ALL Color, then change the palette to Red-Blue-Diverging.
- You should see something like this:



Step 41: Creating Visualization - Temporal Analysis Table in Tableau

- **Purpose**: To visualize the temporal analysis data using Tableau.
- **Guide**:
  - Rename \N to "year", \N 1 to "month", and 6855508 as "count" in Excel.
  - Create a calculated field with the code: DATE(STR([Year]) + "-" + STR([Month]) + "-01").
  - Drag the calculated field to Columns and "count" to Rows.
  - Click on the "new calculated field" in the column pane and select to be "continuous".

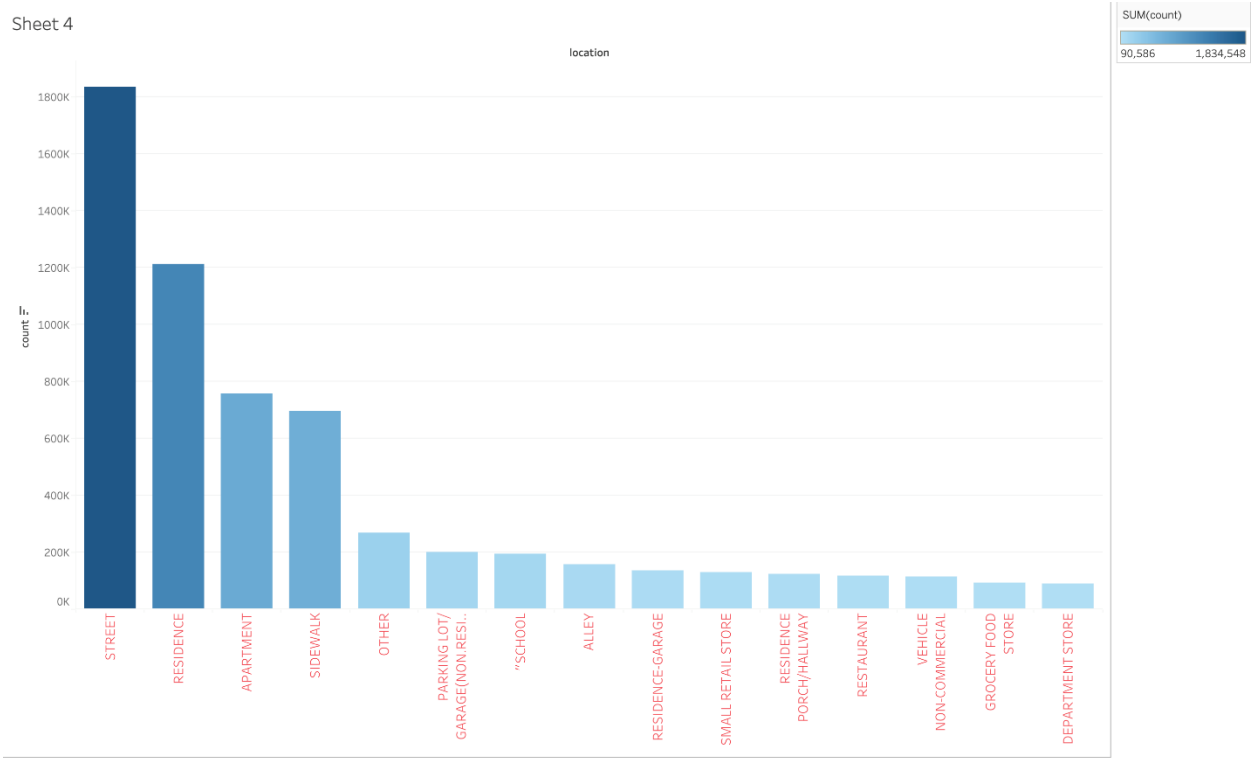
- Click on the "new calculated field" in the column pane and select "Month".
- Right-click on the graph and click on "Trendlines" -> "Show Trendlines".
- Right-click on the highest point in the graph and annotate "point", then click OK.
- Add a new sheet.
- Drag "months" to Columns and "count" to Rows.
- Right-click on the count axis and click "Edit Axis", unselect "Include Zero".
- Select "Custom" for range and set to fixed start and value (400,000).
- Set the second tab to "Uniform".
- Drag "count" to Marks' label to show the count.
- Right-click on "months" and click on "Discrete".
- Right-click on "months" and click on "Edit Alias" to name the months.
- You should see something like this:



Step 42: Creating Visualization - Crime by Location Description Table in Tableau

- **Purpose**: To visualize the crime occurrences based on location descriptions using Tableau.
- **Guide**:
  - Rename F1 to "Location" and F2 to "count".
  - Drag "location" to Columns and "count" to Rows.

- Click on "Sort by Descending".
- Right-click on "location" and click on "Format" to format it.
- Drag "count" to Color.
- You should see something like this:



Step 43: Creating Visualization - Geospatial Analysis Table in Power BI

- **Purpose**: To visualize geospatial analysis using Power BI.
- **Guide**:
  - Open Power BI and log in.
  - Click on your workspace.
  - Click on '+ New', then click on "Semantic Model" and select "CSV".
  - Click on "Maps".
  - Drag latitude to Latitude and longitude to Longitude.
  - Drag "public peace" to Bubble Size.
  - Go to format your visuals and change the map style to grayscale.
  - Go to "Colors" and click on "(fx)" for conditional formatting.
  - Change the field to "count of crime".

- Choose blue as the lowest value and red as the highest value to see the concentration.
- Click on "Heat Maps" to see how crime is spread in Chicago.
- You should see something like this: