LAPD Crime

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R Markdown on Posit Cloud

To explore the Tableau Dashboard instead of seeing the steps listed out, the dashboard can be found in the main repository's readme

Set up the data source page

- Connected to the clean LA excel sheet that was made in the Jupyter notebook
- Added the shape file for LAPD districts as a connection and data source
- Joined the two tables with a left join to make sure my data wasn't altered
  - Joined on fields 'AREA' and 'PREC' since these both were just numbers 1-21 for each district
- Added a data source filter to remove 2024 data since there were only 3 months of data

Created charts

Map

- Changed 'AREA' to discrete dimension
- Set 'Dr No' (report number) default aggregation to COUNT
  - This way I could use it as a count of crimes committed
- Added 'Geometry' as a detail to create a map from the districts
- Added 'Dr No' to color, changed color to red with 5 steps and 80% transparency
  - This colored my districts based on how many crimes were committed
- Added 'Area Name' as a label to display the district name over its area on the map
- Changed background map to 'street'
  - I felt people are most comfortable looking at a street map
- Adjusted labels and tooltip for better readability
- Added 'datetime_OCC' as a filter by year

Sex Treemap

- Used 'Vict Sex' and 'Dr No' to make the treemap
  - This allowed me to get essentially a single stacked bar
- Edited 'Vict Sex' aliases from 'M' and 'F' to 'Male' and 'Female'
- Added 'Vict Sex' as a filter to remove 'Unknown' sex values
- Added 'Vict Sex' to colors to color by gender
- Adjusted labels, tooltip, and colors

Age Histogram

- Used 'Vict Age' and 'Dr No' for a histogram
- Added a calculated field that would make a range for bins
  - The auto generated bins showed up as just the range's start value in the tooltip
  - This way the tooltip would show me the range of ages for each bin
- Since the calculated field was discrete, I had to use a bar chart
  - I increased the bar sizes so they could be close to one another like a histogram

- Added ‘Vict Age’ to filter to exclude ‘0’ values which were just missing data
- Adjusted axis titles, colors, removed lines to look cleaner

Descent Packed Bubbles Chart

- Used ‘Vict Desc’ and ‘Dr No’ for a packed bubbles chart
- Added ‘Vict Desc’ to filter to exclude ‘Other’
- Adjusted colors, titles, tooltip

Weapon Donut Chart

- Used ‘Weapon Desc’ and ‘Dr No’ to create a pie chart
- Filtered using ‘Weapon Desc’ to remove ‘none’ as to show the weapon type as a proportion of crimes where a weapon was used
- Adjusted colors, titles, tooltip
- Created an empty value circle chart
- Joined the two charts on dual axes
- Hid all lines and adjusted circle chart size to make a blank area inside the pie chart

Premise Packed Bubbles Chart

- Used ‘Prem Desc’ and ‘Dr No’ to create a packed bubbles chart
- Adjusted aliases for readability
- Adjusted tooltip, labels, colors

Crime Type Treemap

- Used ‘Crm Cd Desc’ and ‘Dr No’ to make a treemap
- Filtered using ‘Crm Cd Desc’ to remove ‘drug’ since there were 11 occurrences over the 4 years
- Adjusted aliases for readability
- Adjusted colors, labels, tooltip
- Added the weapon premise chart and sex treemap into the tooltip

Created a Dashboard

- I dragged all charts except weapon and sex onto my dashboard
  - These 2 charts will appear when hovering the mouse over the Crime treemap since they are in its tooltip
- Sized and organized for readability
- Added a select action to the map to update all charts on the dashboard
- Made the map’s year filter float to position it better
- Linked all charts as filters so a selection on any chart would filter the dashboard