University of California Tableau User Group (UC TUG)

Presentations By:
UC Office of the President (UCOP)
January 11th, 2019
Agenda

- Color Pallets and Formatting Tips & Tricks – Joey Van Matre (20 minutes)
- Creating Maps Using Spatial Data Files – Sanketh Sangam (20 minutes)
- Best Practices: Choosing the Right Chart – Poorani Rajamanickam (8 minutes)
- Call for Regular Hosts/Presenters (1 minute)
- Q & A (7 minutes)
- Next Meeting (1 minute)
Maps Using Spatial Data Files

- Create maps with spatial data files
- Create small multiples to compare trends across dimensions in a single view.
- Chicago crime data is used for the presentation. The data is aggregated by number of incidents.
Maps Using Spatial Data Files
Choosing the right chart

- Types of chart to use depends on the type of data and the purpose of analysis.

- People understand your data better if it were presented in the right type of chart.
Visualizing Patterns

- Discrete data - use Bar charts.
- Ex: Population of Dolphins and Whales over 5 years
Best Practices for using Bar charts

- Use horizontal labels to improve the readability
- Start y-axis at 0 to appropriately reflect the values in your graph
- Use horizontal bar chart, when your categories to present are too large (more than 10 categories to present)
Visualizing Patterns

✧ Continuous data - use line charts.
✧ Ex: Dubai Gold Sales in the year 2002 by months

Line Chart
Best Practices for using Line charts

✧ Use solid lines only

✧ Don’t plot more than four lines to avoid visual distractions

✧ Use the right height so the lines take up roughly 2/3 of the y-axis height
Visualizing Proportions

- To visualize parts of whole – use Pie charts.
- Ex: Quarterly Sales of a company in a given year
Best Practices for using Pie charts

- Don’t illustrate too many categories to ensure differentiation between slices
- Ensure that the slice values add up to 100%
- Order slices according to their size
Visualizing Proportions

- To visualize proportions over time – use Stacked area chart.
- Ex: Proportion of a company’s sales by regions over months for a given year
Best Practices for using Stacked Area charts

🔹 Use transparent colors so information isn’t obscured in the background

🔹 Don’t display more than four categories to avoid clutter

🔹 Organize highly variable data at the top of the chart to make it easy to read
Visualizing Relationships

- To identify correlation – use Scatter plot and Bubble chart.
- Ex: Correlation between Age and Earnings, Sales by products with percentage of market share
Best Practices for using Scatter plot

✧ Include more variables, such as different sizes, to incorporate more data

✧ Start y-axis at 0 to represent data accurately

✧ If you use trend lines, only use a maximum of two to make your plot easy to understand
Best Practices for using Bubble charts

- Scale bubbles according to area, not diameter
- Make sure labels are clear and visible
- Use circular shapes only
Visualizing Relationships

- To identify outliers – use Box plot. Ex: Outliers in 6th Grade Math Test
- To spot differences – use Heat maps Ex: Company’s Customers by product and country
Best Practices for using Heat maps

 довольенный

 ◊ Use a basic and clear map outline to avoid distracting from the data

 ◊ Use a single color in varying shades to show changes in data

 ◊ Avoid using multiple patterns
Visualizing Spatial Relationships

✧ To visualize data by region or by space and time – use maps.
✧ Ex: AT&T (U-verse) coverage available in US.
Next Meeting

February 8th, 2019