

Code Document

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1 Global Variable

- Mode. Current state of detailed level.
- Map_mode. Current state of color coding.
- path. DOM of state path.
- county_path. DOM of county path.
- geoGenerator. D3 pre-defined geo-element generator.
- projection. D3 pre-defined projection calculator.
- bubbles. DOM of bubble map.
- toolTip_city. toolTip_state. toolTip_county. DOM of Tooltips.
- Plot_bar_chart. Object including multiple functions to draw the bar chart.
- Plot_pie_chart. Object including multiple functions to draw the pie chart.

2 Function

2.1 toggle_County_State()

Change the state of county and state. If bar chart need to change, trigger Plot_bar_chart at the same time.

2.2 Toggle()

Update bubble map. Trigger make_bubble_map.

2.3 update_county(ID)

Based on the provided state ID, update the shown county graph.
input:

- ID. State ID.

2.4 draw_State(state)

Draw state graph.

Changed glpbal variable:

- path

input:

- state. Raw json data of state.

2.5 draw_County(county)

Draw county graph.

Changed global variable:

- county_path

input:

- county. Raw json data of county.

2.6 get_ramp(data,ptr)

Get the range of data[ptr].

input:

- data. Object with ptr as key.
- ptr. Point out the target to get the range.

2.7 State_color(), County_color()

Update the color of state and county paths based on the current situation.

2.8 make_bubble_map(Map_mode='Type', ptr = 'Accident')

Update bubble map based on map mode and incidents types.

input:

- Map_mode. Point out the mode of map.
- ptr. Point out the type of incidents.

2.9 Plot_bar_chart.setup_bars()

2.10 Plot_bar_chart.setup_scales()

2.11 Plot_bar_chart.setup_axis()

Helper functions for bar chart to update its information.

2.12 Plot_bar_chart.draw_type_chart()

Main function to draw bar chart based on input.

input:

- State.
- County.
- duration.

2.13 Plot_pie_chart.setup_legends()

Helper functions for pie chart to update its information.

2.14 Plot_pie_chart.draw_pie_chart()

Main function to draw pie chart based on input.

input:

- State.
- County.
- duration.