

Homework 1

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INFSCI 2415 / LIS 2690: Information Visualization

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Homework 1 I

Task: Generate visualizations to compare the poverty data by states, by races, and by time.

- Download the poverty data from US Census:

(D1) Distribution of the Poor by Race and Hispanic Origin

(D2) Number of Poor and Poverty Rate, by State

- Work in groups (3-4 members per group) to create **three visualization designs** using D3
- Submit your report in PDF, and your code in *.zip, via courseweb. One submission per group.
- **Due:** 2017-09-25 11.59pm
- **Demo** time: to be scheduled

Homework 1 II

- 1 Read the description about [Census Poverty Measure](#) at [Census.gov](#).
- 2 Generate three visualizations to compare the data by states, by races, and by time.
 - a) Use dataset D1. To compare data across races and over time, generate a time-series plot to show how the poverty by race change from 1990 to 2015. You need to show at least three time points in the plot: 1995, 2005, and 2015. Omit race categories with “NA” values.
 - b) Use dataset D2. To compare data across states and over time, generate three bar charts corresponding to poverty of the states in 1995, 2005, and 2015 (one chart per year), where each bar represents a state.
 - c) Use datasets D1 & D2. Use your creativity to design and generate a composite visualization to show how the data change between 1990 and 2015, by state and by race. The visualization can include multiple charts or mix different types of charts.

Homework 1 III

- 3 All visualizations need to be properly annotated and labeled to help clearly explain what the visualizations show.
- 4 Explain in your report:
 - what you intend to show in the visualization
 - the rationale for each design (why is it an effective representation for the things you intend to show?)
 - **in the beginning of the report**, describe your team contribution, including (a) names and PITT IDs of all members, and (b) one paragraph to briefly describe the contribution of each member