Data Visualization Project 2 Proposal   10/21/2020

Group 6: Screaming Falcon

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With graduation around the corner, we are faced with an intimidating challenge: How do we best enter the global workforce while unemployment is at an all-time high? There are a lot of factors that should go into that decision such as how competitive is the environment for open positions, how much should I make in my role, can I afford to live in the major cities, what companies could I work for, what are the trends for job security? For our second project, we intend to piece together the puzzle with a visualization that will help our classmates, and aspiring Data Scientists across the US, decide where to hunt for jobs.

Our sources will be the [Bureau of Labor Statistics](#) for unemployment statistics over the past 4 quarters by state, [World Population Review](#) for state-wide cost of living estimates providing cost of living estimates on a state level, and [Glassdoor](#) which will be scraped for employer data for at least one major city per state. We do not have data on March 2020 regarding unemployment from BLS as the data appeared to not have been collected during lockdown.

The insights we plan to gain from our data sources include change in unemployment from quarter to quarter, for the last 12 months, cost of living versus different quartiles of paygrades for Data Scientists, the number of samples in each salary quartile estimate, and the employers who have the most job openings for Data Scientists. These insights will be delivered on a state level, allowing us a more granular view of where we should be looking for work in January while also reflecting national trends over time.

Our visualizations may consist of a heatmap of the United States showing the change in unemployment between specific time periods. We are considering a sliding ruler allowing the user to select what time window they would like to display on the map: change in unemployment from 12 months ago to present, 6 months ago present, and 3 months ago to present. Another design we have considered is a dynamic bar chart beside the map displaying the lowest unemployment states, that will also change based on the time window.

Buttons could be implemented to reflect an alternative display for the map where the display will reflect a ratio made from the cost of living data and quartile salary data to reflect areas that will be most comfortable to live in on the local Data Scientists' salary. We may also include a feature where on mouse-over or click the state will display the state's largest employer for Data Scientists with a pop-up window displaying the salary quartiles, sample size, and cost of living rating for the state.