User Application for Hiring Season Investigation

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We used the data to build an application that can be useful for Indeed's job seekers who are interested in knowing more about the popular peak times for job postings in their industry of interest. We define peak times as monthly fluctuations in any industry for the data provided from December 2016 to January 2018.

We represent industry specific job fluctuations and their relative maps in the app that can be a visual friendly way for users to analyze the increase in log of the summation of the job counts in their industry of interest. The users basically get to click on their industry of interest to see the monthly fluctuations of that industry, and also have the option to see the map that highlights the specific cities that have the highest job posting counts for that industry

We used RStudio to create the app and the graphs. We created new variables two new variable year and month using the lubridate function year() and month() and we use these two variables to create new time series for 14 month. We found the unique categories in our employer industries. We ran a for-loop that ran through all the categories and created subsets of our large data for each industry. It counted the total employerJobCount for each month and plotted it against that month using ggplot().

We finally end the presentation by selecting six very interesting industries from the 29 industries that show sharp fluctuation patterns during specific months. We show that the financial industry for instance has a very sharp increase (almost 139%) from the month of September to October , which for instance may be very representative of the recruitment cycle of graduates going into their fall semester of senior year. This is a pattern that has become very popular amongst the financial and banking industries, and especially among entry level positions. Our research from the data shows that we were able to observe that frequent job titles that came up during the months of September – October were mostly for "assistant" level positions which are representative of entry level positions and may explain the recruitment cycle for undergraduates in the financial industry. However, some of the data did not explain why very different job titles showed up during those months which may mean that there may be confounding variables clouding our judgement from the data.

Thus there may be a lot of confounding variables that can affect our decisions about the industry monthly fluctuations such as a change in indeed use by companies in each industry

or industry growth/ decline, or even how some of the cycles might be representative of the fact that the job market in 2017 has been doing really well due to the low unemployment in the U.S. economy.