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CS 3300 Project 2 Writeup

Each member contributed well to the team throughout this project. We all met a few times throughout the project to make sure we were on track throughout the project. For coding, Aayush made the Pie Chart, Wyatt made the bar chart, and Jeannie made the map. We all equally contributed to creating the event handlers and styling to make our application function and look good. Additionally, all major decisions about layout and content were made together.

We got our data from multiple sources (listed at the end of our writeup). Data detailing Airbnb and hotel prices, flight prices, meal prices, and the latitude and longitude of major cities were found. All of these datasets were combined into one aggregate dataset for ease of use. Data was grouped by major cities that we thought were important or interesting to show. We had to make sure we had complete data for every city we used. Thus every city we used had to be in our limiting data set, the hotel and airbnb data. Once we decided which cities we wanted to display, we simply went through all the other datasets to obtain the appropriate data for each city, combining them into one aggregate dataset.

We decided to represent our data in multiple ways. Total cost was represented both as the size of a circle on the US map, and a physical number throughout our display. Each component of the total cost can be viewed in a bar graph so it is easily compared to the cost of the same component in other cities, as well as in a pie chart to see its fraction of the total cost. Cities are represented by circles with the correct longitude and latitude on the US map, and each aspect relating to a city is highlighted on mouseover. This allows the user to view how each city's cost compare to the rest. We had a few different data transformations including using a square root scale to display the circle size as a function of total cost, converting the taxi data from a 10 kilometer ride to a 10 mile ride to make it easier for our target audience (US travelers), and creating the total cost itself as a makeup of cost components. Total cost is the projected cost for three days and two nights in the target city. We estimated this to be 4 one way rides per day, 2 meals a day, 2 nights of lodging, and airfare both ways.

Planning a trip is difficult. One of the most important aspects of trip planning is finding one that you can afford. With our data visualization, we hope to aid those looking to travel in the near future by showing them which cities cost the most to travel to, give them an overview of their travel options, and help them compare the costs of specific travel aspects in different cities. Since all our data are averages for each category, they can also see how any travel deals they may have found stack up to the averages to help them make a more informed purchase.

In constructing this visualization, we had many notable findings. It was very surprising to us that many of the hotel averages were actually lower than airbnb averages. Since airbnb is becoming a popular alternative to hotels, we figured there would be substantial savings. It was also interesting how cheap the total cost of staying in Orlando was compared to other cities. We figured this must be related to Disney subsidizing flights and hotels through packages. Another thing that was surprising was the fact that despite major variations in flight costs,

lodging costs, and transportation costs, most cities had relatively similar food costs, especially for cheap meals.

Data Sources

Hotel vs Airbnb Data for 20 major US cities in 2015:
https://qz.com/779121/airbnb-vs-hotel-cost-comparison-you-can-rent-an-entire-home-on-airbnb-for-the-price-of-a-hotel-room/

Latitude and Longitude of major cities:
http://www.artscipub.com/info/latlonofmajorcities.asp

Average airfare from major cities: https://www.transtats.bts.gov/AverageFare/

Average cost of restaurant meal, taxi data, and public transportation data:
https://www.numbeo.com/cost-of-living/country_result.jsp?country=United+States