# Capstone Project Proposal

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For my Capstone Project I intend to do an analysis of online customer reviews for the Toronto restaurant REDS Midtown Tavern (http://redsmidtowntavern.com/). This analysis will be targeted to the management team at REDS Midtown Tavern. Based on the results of my analysis, the management team will decide what changes to implement within the restaurant in order to improve the restaurant's customer count, its profits, as well as its customer retention. My analysis will be focussed on the following four problem areas for the restaurant: ambiance (e.g. noise, lighting), food quality (e.g. flavours, temperature, presentation), service quality from front-of-house staff, and waiting times during service (e.g. seating wait time, beverage delivery, food delivery). In order to perform my analysis, I will gather data from popular review websites such as Yelp (https://www.yelp.ca/toronto), Google (https://www.google.ca/) and TripAdvisor (https://www.tripadvisor.ca/). This data will consist of the numerical ratings as well as text data from the written customer ratings.

I will begin my data analysis by gathering the aforementioned data using a web scraping tool such as import.io (https://www.import.io/). Once acquired, I will use R to agglomerate and clean the data from the different websites, putting it into a common format. I will then identify some key regular expressions that will be useful for identifying sentiments regarding the problem areas mentioned above. Equipped with these expressions, I will perform some text mining on the data in R to collect information regarding the occurrences of the different sentiments. Following this I will generate some exploratory plots to examine the relationships between the different sentiments expressed in reviews regarding the problem areas and the associated numerical ratings. While performing this analysis, I additionally hope to identify a key demographic towards which the restaurant should target its marketing and branding. If there is additional time, I will also perform a similar analysis on a nearby competitor of REDS Midtown Tavern in order to see how the reviews compare.

Once my analysis is complete, I will write a report using R Markdown or LaTeX to outline my results and recommendation. I will submit this report along with my data analysis code.