**Team 10: Yuchen Zhao, Tanner Reichard, Yuwei Yao, Jiaxin Lu**

**Group Assignment:**

As a team, plan out (either on paper, powerpoint, or on a white board [and take a high-quality picture for submission]) how you will exploit the tools we have discussed in this class to get your favorite burger more media exposure

Essentially create a Project Plan (Outline) for how you could use MapReduce or Spark (including Spark Streaming) to better position your favorite burger for revenue growth, sales, etc.

**Step 1:** Using SparkScala, we’ll first analyze company sales data using a mapreduce to calculate the average amount of burger sold per day for each month. With this data in hand, we will search for days with the lowest amount of burgers sold. On those particular days, we’ll advertise a “Twitter discount day”, in which customers will receive a discount if they tweet out a picture or post about that particular burger. This effectively constitutes social media version of the “early bird special”, which is designed to capture additional customers in off-peak times through discount incentives.

========================================================================

**Step 2:** Using the same company data, we can also create a social media boost on days with a high volume of sales. On days with a higher than average amount of burgers sold per day, the company can promote the “#burger of the day” that sold the most by volume. This artificially creates brand loyalty sentiment by defining pitted classes and light competition between classes in order to draw support. Hopefully, this generates a larger social media presence in order for consumers to pay attention to our individual products.

========================================================================

**Step 3:** At the same time, we can utilize social media influencers, namely Food Bloggers, to create content-interactive product generation. Effectively, we can calculate the similarity between the most popular burgers, and invite food bloggers to “invent” new burgers for the company that consumers would find popular. This hopefully increases consumer satisfaction by drawing out consumer sentiment, and allows the followers of these influencers to have an investment in the company by giving them a platform for their voice.

========================================================================

**Step 4**: Have our social media team consult a new spark scala program that tracks and saves the most popular hashtag generated by our social media influencers, with an additional filter to get only the hashtag with our burger (in order to filter out noise).

========================================================================

**Step 5**: We can then trace back to the accounts that utilized a hashtag about our burger, and then utilize web scraping to gather their comments--as well as their follower’s comments--about burger.

========================================================================

**Step 6**: We can then use text analysis to count the word frequency of all the posts. We can build a word cloud to see what potential customers are talking about our burger and thus we can map our brand image. For example, we may find words like “juicy”, ‘tasty’ and “cheap”, subsequently we can position our burger as a tasty product with fair price. We might also find something negative in word cloud and this is where we need to address in the feature. This allows us to create a dynamic and adaptable marketing strategy in order to simultaneously address and increase consumer sentiment, while providing an easily-accessible platform with which to address inadequacy and flaws in the product.

========================================================================