**The Avengers**

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**Proposal**

We aim to illustrate how marketing, conversing, and servicing consumers through social media activity and engagement affects stock prices for cell phone providers such as AT&T, Sprint, T-Mobile, and Verizon. In an increasingly online world, social media has proven an important, yet difficult, challenge for the modern business to market. With the constantly changing and opaque algorithms used by Facebook and Twitter to organize and display content to users, many industries are finding it difficult to successfully market to their customer base on these platforms. We believe that by quantifying social media activity from service providers, an industry uniquely tied to the social media trend, we can determine a formula that could be used by businesses in different markets to increase the returns from social media marketing.

Currently, marketers are finding it difficult to appear frequently in Facebook users’ News Feeds. Mike Eckstein, on the website Buffer, reports that Facebook has changed “their post ranking algorithm to prioritize personal posts over brand posts,” notably, that “a key part of the change is that they are using ‘meaningful engagement’ as an important signal that a post should be prioritized” (2018). We will scrape data from Facebook and Twitter to gather information on the frequency of posts by the business, including comments on both their own content and on those of users, as well as the responses or “reactions” from customers on their content. We will look at the length of comment chains, and if that has any resulting influence on customer response. After we have extracted this information, we will run models and ratios to simplify the amount of data collected. This will also include dividing the data into groups based on timeframe as well as content, namely, a call to action or a lifestyle post. Finally, now that the data is transformed, compare them to stock prices and market shares as found on NASDAQ and MarketWatch to determine if there is causation between the two.

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