



# CAPSTONE PROJECT

## WEB AND SOCIAL MEDIA ANALYTICS

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# OBJECTIVE

To develop a new product optimally and create some marketing strategies.

To increase market share, brand value and customer satisfaction.

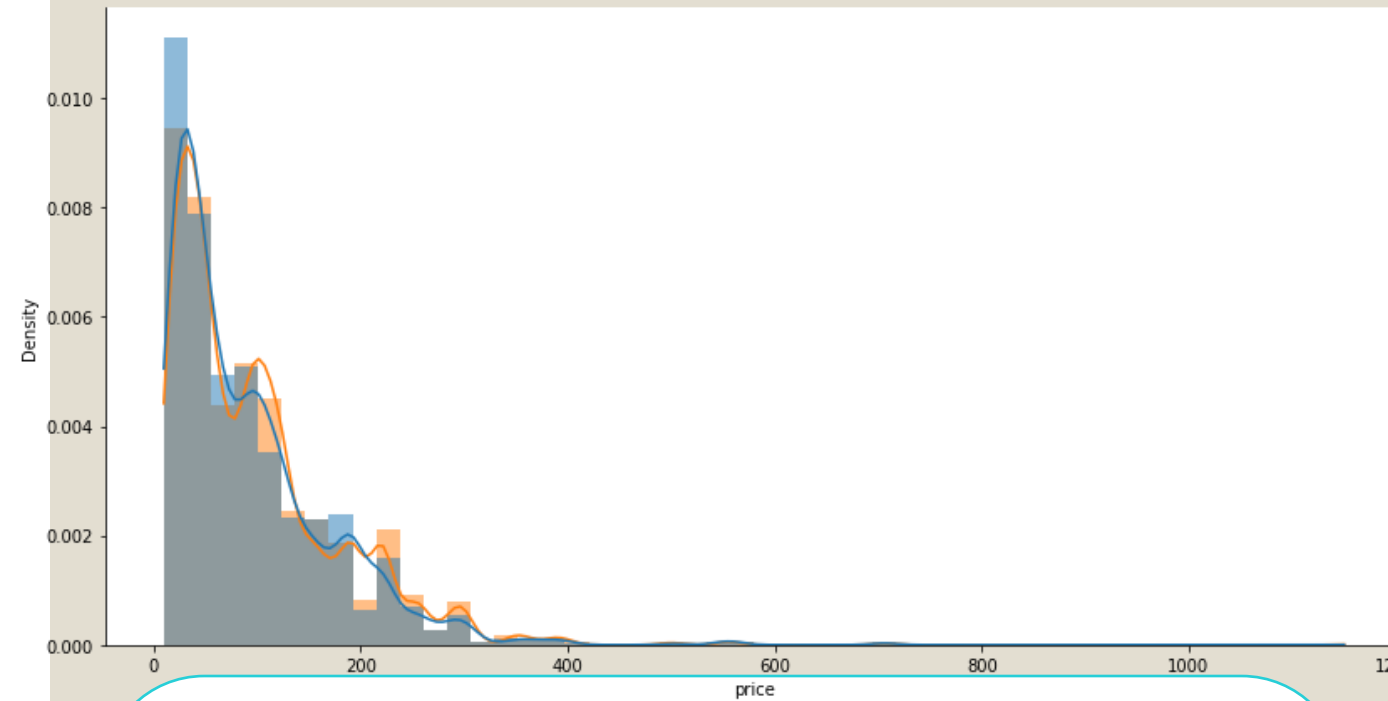
To understand competitors and user preferences for modifying strategies.

## BACKGROUND

A Mobile manufacturer based in the US that entered the market three years ago.

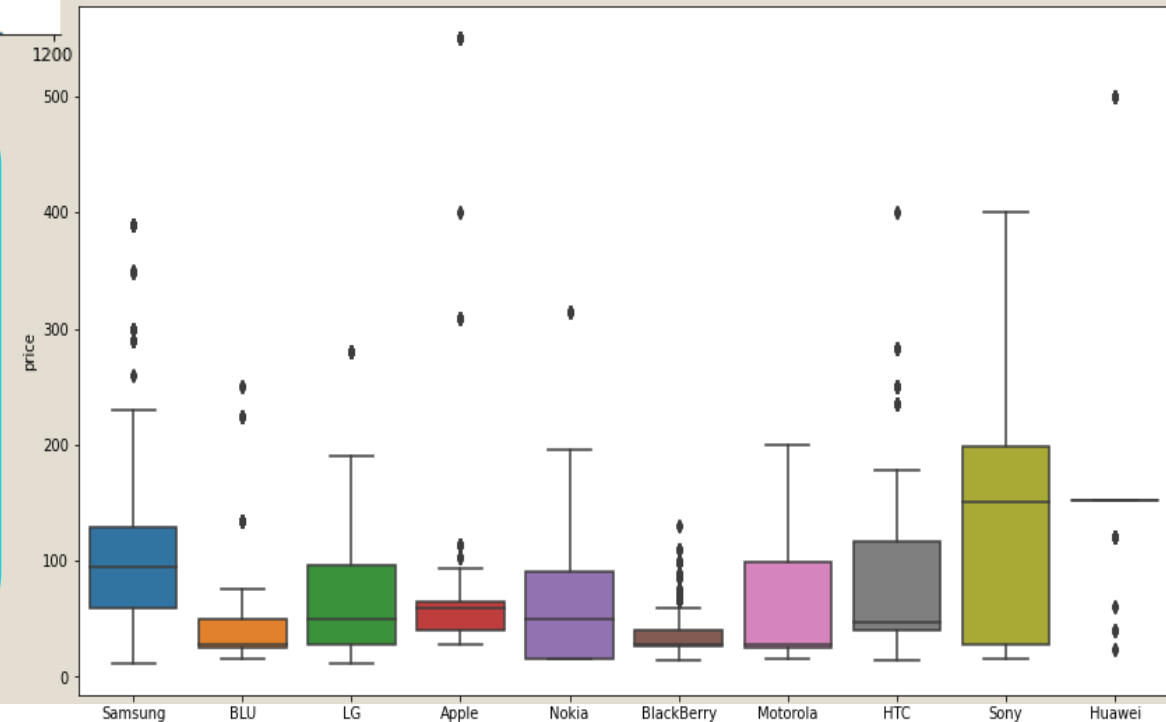
As a new entrant to the industry, requiring insight on competitors and customer preferences for marketing strategy optimization.

# Price Distribution by Review sentiment

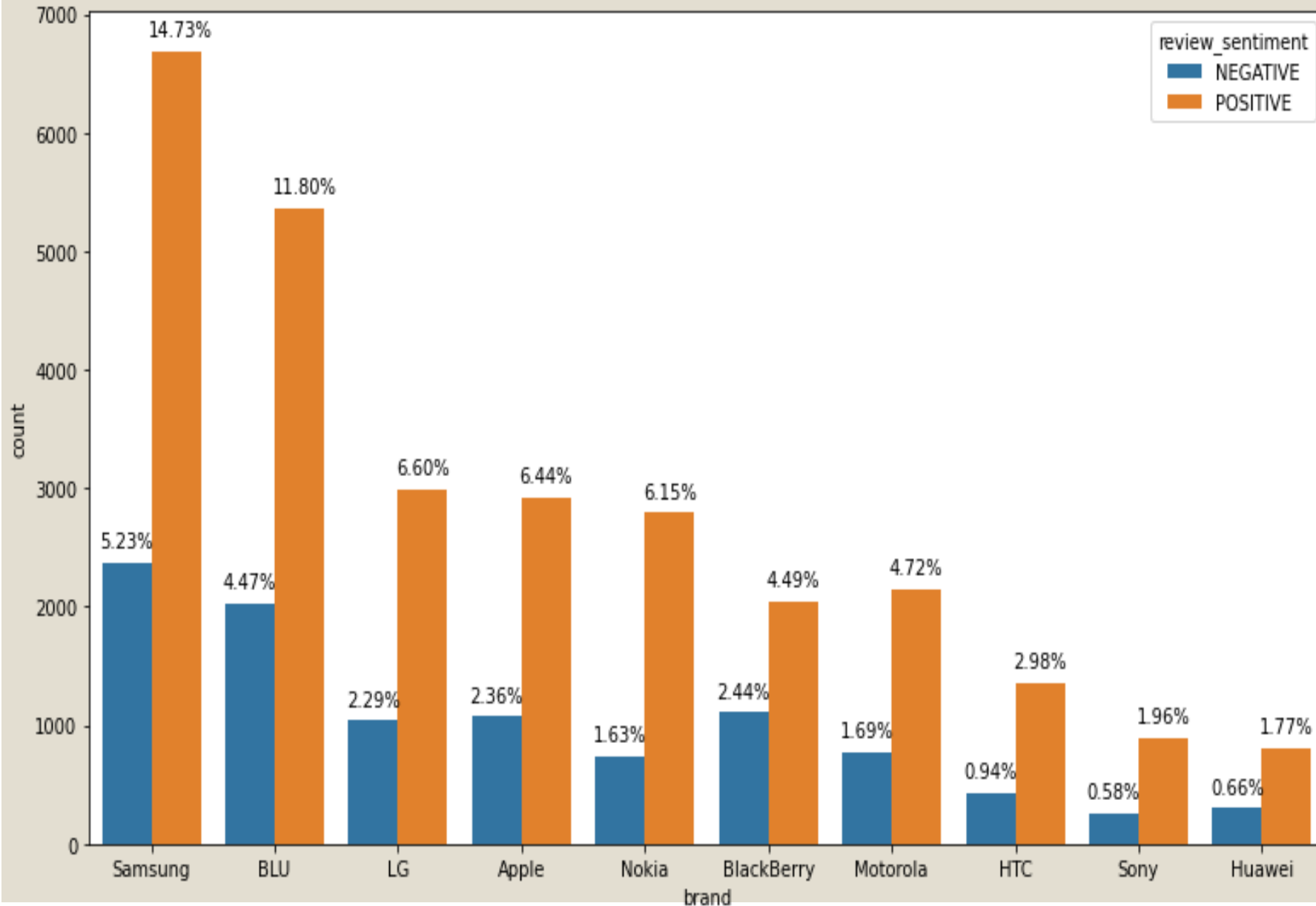


- Most phones are priced below \$250. Phones between \$40-60, \$100-120 and \$220-240 have mostly positive reviews.
- Phone below \$50, between \$80-100 and \$180-200 have more negative reviews.
- Apple has the highest priced outliers with it's highest near \$600. Samsung has an evenly distributed price range with outliers in the \$250-\$400.

## Price Distribution by Top 10 Brands



## Review Sentiment Distribution by Top 10 Brands



- Samsung is the Top Brand based on number of reviews.
- BLU, LG, Apple and Nokia make up the Top 5.
- Nokia has the widest Positive: Negative Review ratio out of all brands.

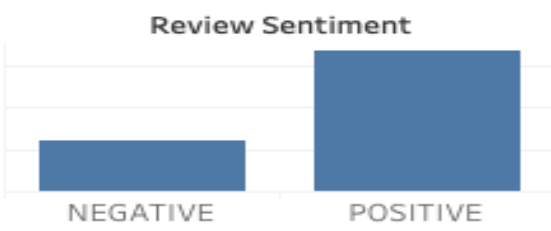




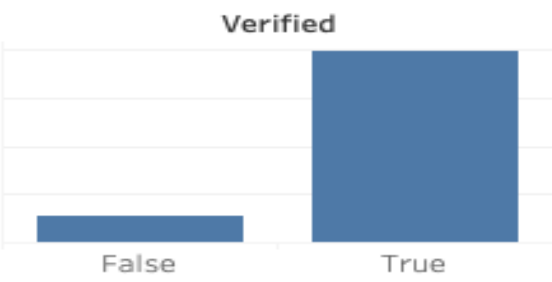
## Positive WordCloud



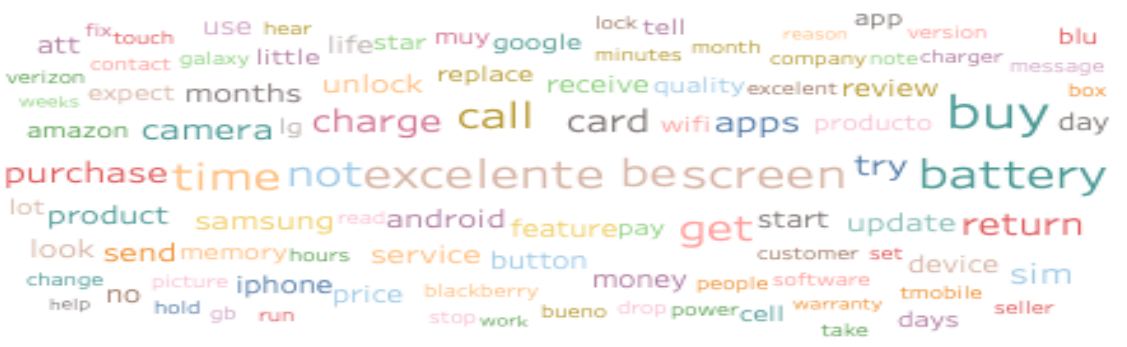
## Review Sentiment Distribution



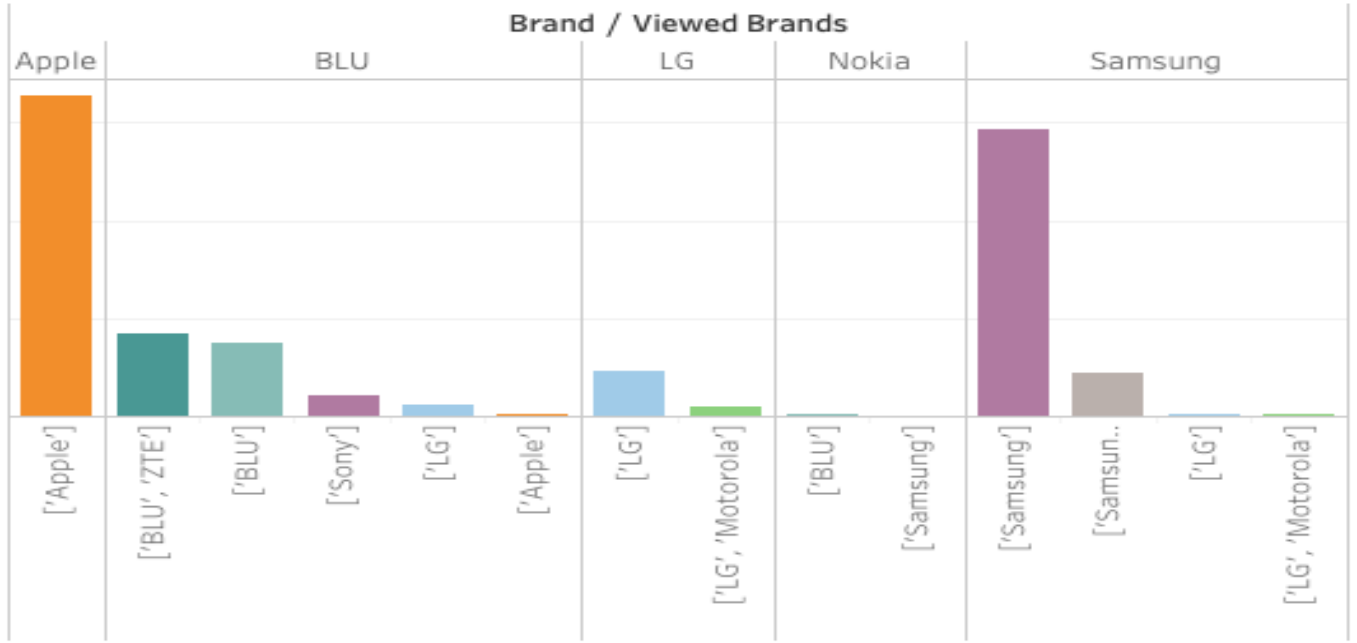
## Verified Distribution



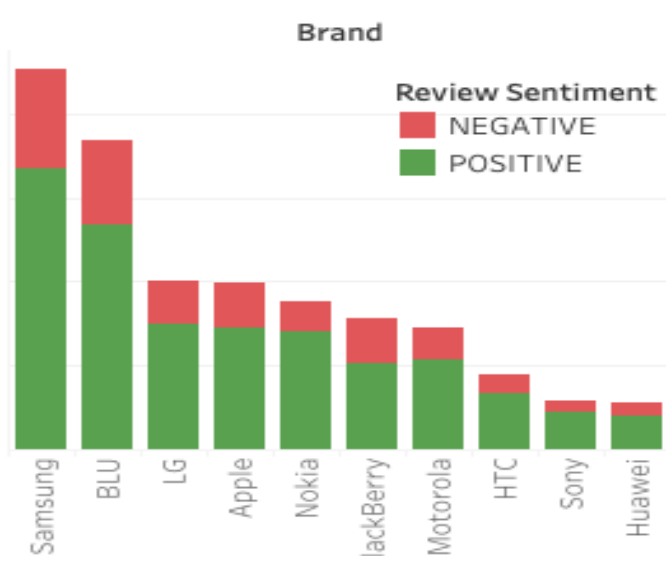
## Negative WordCloud



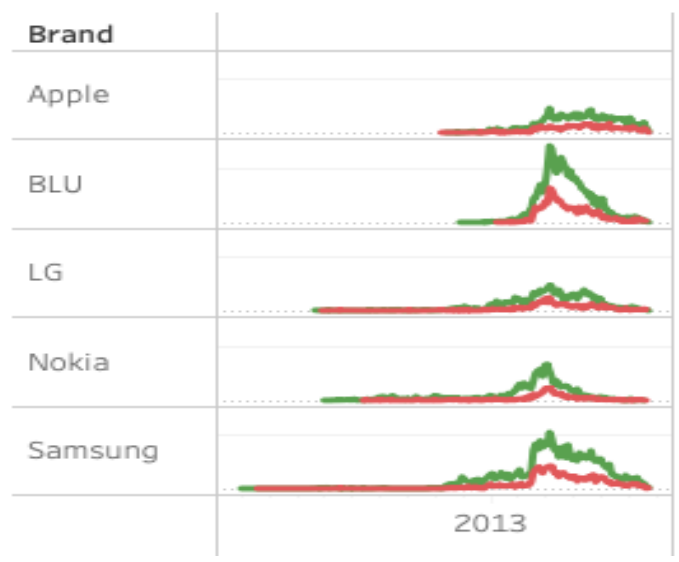
## Top Viewed Brands for each Brand



## Top 10 Brands by Review Sentiment



## Top 5 Brands by Time and Review Sentiment





### Recommendations:

- Battery Life and Screen should be the priority features for creating the optimal phone.
- The price should ideally fall within the \$40-60 or \$80-120 range for reasonable to mid-tier pricing as these are more positively received. For high range pricing, \$220-240 range is recommended.
- Marketing strategies should focus on USP of the brand that sets it apart from others. Online marketing and interaction with consumers can improve brand awareness and sentiment.

### Additional Key Insights:

- The primary concerns and positively received features of most phones among reviewers are: Battery Life and Screen.
- Most phone fall within the \$50-\$150 range. With the majority products priced below \$200.
- From the also viewed brands we can see that Apple has the highest brand loyalty among consumers.
- Samsung has the highest market share of all brands and has the highest brands loyalty after Apple.

## Appendix: Data Methodology:

- Data from Amazon Reviews of cell phone data and metadata was cleaned of duplicates, missing data, unnecessary columns and merged.
- EDA was performed for more insight, then text data was preprocessing through stop word removal, stemming, lemmatizing.
- Positive and Negative features were extracted for Word Clouds and Tableau Dashboarding.
- Model was developed and Evaluated while testing accuracy with different classifiers and vectorizers.

### Appendix: Data Assumptions:

- Also viewed brands, are used to indicate brand loyalty. If the also viewed brand is same as the original brand, high brand loyalty and vice versa.
- Number of reviews indicate market share of a particular brand I.e., the popularity of the brand