TWITTER SENTIMENT ANALYSIS

QuestionPro

Business Understanding Overview

From a business standpoint let’s look at Sentiment Analysis. The good news is: with the power of the internet, businesses today get a huge estimate of customer feedback through their business website, social media page, business listings, etc. However, the bad news is a majority of businesses do not even know how to use this information to improve themselves.

Business Problem Statement

The Company wish to explore emotions expressed by users of Apple, Google and Android products. Currently the company collects sentiments manually by having a team classify each tweet as positive, negative or neutral.

Automating this process of analyzing sentiments will ensure the team is able to get real-time sentiment insights.

Main Business Objective

How do we use available data to create a model that will be able to classify future tweets with the correct sentiments? This will save the company team both time and money by moving away from the manual process. This will help grow loyalty and sales.

Why is Twitter Sentiment Analysis important?

- Sentiment Analysis will help the company understand consumer behaviour and preferences.
- By understanding customer feedback, the company can identify areas where they need to improve their products or services.
- Sentiment Analysis can help the company monitor their brand reputation online and quickly respond to reviews.

Data Description

The data provided is in CSV format. In computing Comma-Separated Values(CSV) file stores tabular data (numbers and text). Each record consists of one or more field,separated by commas. Attributes Information of the data is:

Tweet text: The tweets given in the data

Emotion in a tweet is directed at: The tweets collected and the types of devices associated with(Negative or positive emotion)

Emotion directed at a brand or product: sentiments associated with Google or Apple and Android products.

Modelling Overview

After processing the data and analyzing to determine its key characteristics: I came up with a model that accurately evaluates and predicts the sentiments towards given product lines.

I obtained a model with an accuracy of approximately 67% in its predictions.

Conclusions

- The tweets all together recorded higher negative tweets than positive tweets but on viewing tweets of each product separately, each product recorded higher positive than negative tweets.
- iPad product had the highest positive and negative tweets directed towards it.
- Android, android app and other Apple products or Services had the lowest positive sentiments directed towards them.
- The metric of success was set at 60% but the accuracy of predicting the product user sentiment is at around 67%, following the best modelling outcome.

Recommendations

I would recommend the company to specifically focus on improving all their products and to be particular:

- Focus on marketing Android, Android app, and other Apple products or Services much more as they had the least number of tweets about them, meaning customers really do not have much of an opinion towards them which would mean they are not using them.
- Despite the iPad being the product with the highest tweets it also had the highest negative tweets, the company should direct resources on finding out why it had the highest negative tweets.
- Apple and iPhone had the third and second highest negative tweets respectively, the company should also find out why is that.