Understanding Consumer Perception for a Product

Jing Liu(liu00183@umn.edu) | Prathamesh Dalvi (dalvi012@umn.edu)| Chelsea Dong (dong0084@umn.edu)| Neelkanteshwar Reddy Rebala(rebal001@umn.edu) | Udit Ranjan(ranja026@umn.edu)|

Abstract

Our project provides companies and businesses the ability to track what consumers are saying about their products and services, on Social Media. As a proof-of-concept, we took the new Apple iPhone X as an example and worked with data from Twitter. We implemented our solution using AWS services and calculated the sentiment for tweets, identified what features people liked and disliked, and tried to find key influencers, that could be targeted by companies, to increase their reach on social media. Our analysis is presented on a dashboard made using Elasticsearch and Kibana.

Solution Architecture

Twitter - We tracked tweets related to the iPhoneX, from across the world

Kinesis - We used the Kinesis streaming service to obtain tweets and process them before storage

DynamoDB - A NoSQL database - This was the primary data store, where we stored the data, after processing from Kinesis

Lambda - We wrote custom python code, which is triggered every few minutes, and copies the data to a search engine

Elasticsearch, an open-source search engine - We indexed our processed data in ES, to make our data searchable in various ways

Kibana - Finally, we used Kibana to generate visualizations, and create a user-friendly dashboard

Future Scope & Applications

360 product overview - Build a holistic understanding of your products, by integrating social media with internal data

Competitive Analytics - Understand your competitors' strategy and engagement with user on social media

Key Influencers - Find people who are brand advocates and have a big following, to be potential brand ambassadors

Policy making - Gauge how the public reacts to important policy decisions

Find out more details on Github: https://github.com/prathameshsdalvi/twitter-streaming-analytics