Sentiment Analysis of Amazon Product Reviews

Capstone 1 project proposal

Problem

E-commerce has revolutionized today's shopping experience. Online customer reviews and ratings of every product/brand/service help the consumers to make a smart and informed decision before buying a product or service. Customer reviews are also beneficial for manufacturers to improve their products and services. Retail websites like Amazon.com allow users to submit their opinion in the form of numerical stars (from 1-5) or comments about a product. These star ratings provide excellent labels for training ML models to predict the sentiment of text related to a particular product or line of products. This allows sellers to get an overview of sentiment for a large number of unlabelled reviews and in some cases can and help sellers understand how customers are feeling about their product. In my capstone 1 project, I propose building an ML model to evaluate the positive and negative sentiment of an Amazon.com product review.

Clients

Sentiment analysis of product reviews has diverse applications. E-commerce companies such as Amazon.com, eBay.com, etc and technology companies (Apple, Microsoft, etc) can use to predict what people think about their product or market trend. Social media companies can also use to study the sentiment of social conversations.

Data Source

For this project, I will use the baby product reviews dataset from Amazon.com. The dataset is made available by Julian McAuley, UCSD. The dataset contains information about reviewer ID, asin (product ID), reviewer name, helpful (helpfulness rating of the review), review text, overall (rating of the product), summary (summary of the review), review time.

Amazon Review Data Link: http://jmcauley.ucsd.edu/data/amazon/

Project Outline

In this project, I propose building a supervised machine learning to classify the positive and negative reviews of customers over baby products of Amazon.com.

Deliverables:

I. Code as jupyter notebook:

For Data Acquisition, Data Wrangling, Data Exploration & Analysis, Machine Learning Model Development

II. Paper on the capstone project

III. Presentation on the capstone project