SENTIMENT ANALYSIS IN MARKETING

PROJECT TITLE : SENTIMENT ANALYSIS IN MARKETING.

***Phase 5:* overall submission of the project.**

TOPIC: Developing SENTIMENT ANALYSIS model respectively.

SENTIMENT ANALYSIS IN MARKETING

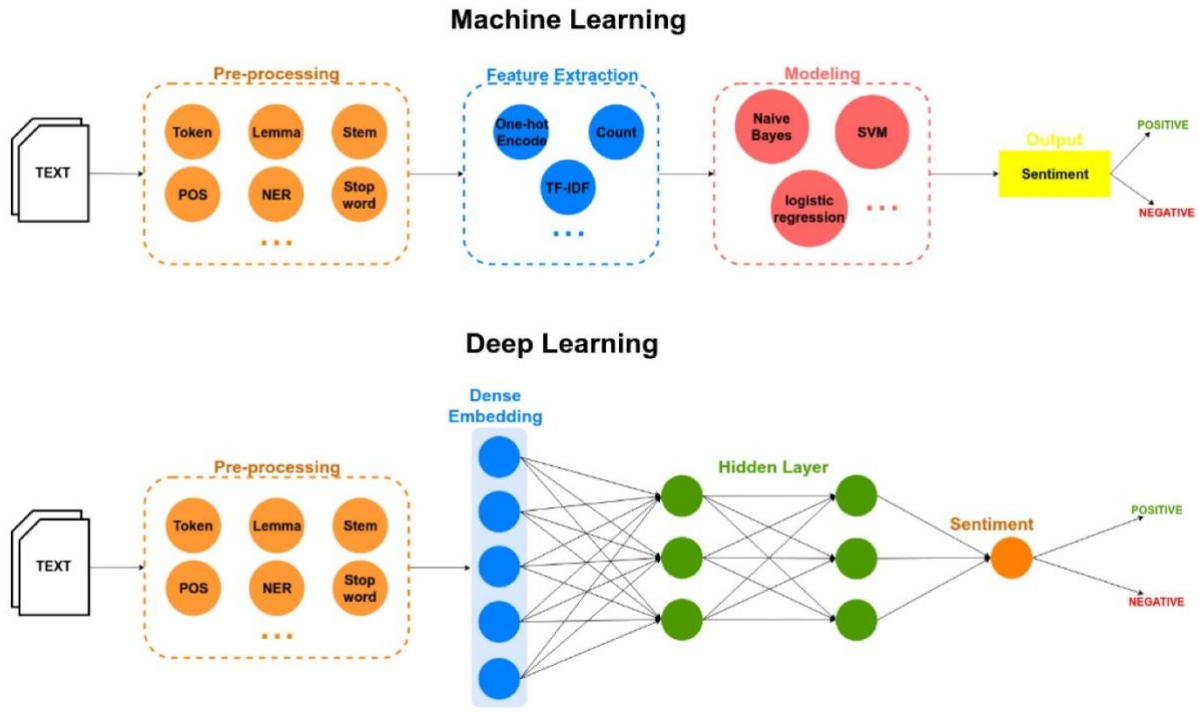
INTRODUCTION:

- **With advancements in technology and fields like deep learning, sentiment analysis is becoming more and more common for companies that want to gauge their customers' sentiments.**
- **Today, businesses use natural language processing, statistical analysis, and text analysis to identify the sentiment and classify words into positive, negative, and neutral categories.**
- **The best companies understand the importance of understanding their customers' sentiments – what they are saying, what they mean and how they are saying. You can use xsentiment analysis to identify customer sentiment in comments, reviews, tweets, or social media platforms where people mention your brand.**

As sentiment analysis is the domain of understanding emotions using software,

we have prepared a complete guide to understand ‘what is sentiment analysis?’,

its tools, and different classifications and use cases.



DATA INFORMATION:

- The Amazon reviews dataset consists of reviews from amazon. The data span a period of 18 years, including ~35 million reviews up to March 2013. Reviews include product and user information, ratings, and a plaintext review. For more information, please refer to the following paper: and Hidden factors and hidden topics: understanding rating dimensions with review text. , 2013
- The Amazon reviews full score dataset is constructed by Xiang Zhang (xiang.zhang@nyu.edu) from the above dataset. It is used as a text classification benchmark in the following paper: Xiang Zhang, Zhao, Yann . Character-level Convolutional Networks . Advances in Neural Information Processing Systems 28 (NIPS 2015).
- The Amazon reviews full score dataset is constructed by randomly taking 200,000 samples for each review score from 1 to 5. In total there are 1,000,000 samples.

METHODOLOGY FOR IMPLEMENTATION:

Data collection:

Data which means product reviews collected from amazon.com from May 1996 to July 2014. Each review includes the following information: 1) reviewer ID; 2) product ID; 3) rating; 4) time of the review; 5) helpfulness; 6) review text. Every rating is

based on a 5-star scale, resulting all the ratings to be ranged from 1-star to 5-star with no
existence of a half-star or a quarter-star.

POS TAGGING:

Tokenization of reviews after removal of STOP words which mean nothing related to sentiment is the basic requirement for POS tagging. After proper removal of STOP words like “am, is, are, the, but” and so on the remaining sentences are converted in tokens. These tokens take part in POS tagging In natural language processing, part-of-speech (POS) taggers have been
developed to classify words based on their parts of speech. For sentiment analysis, a POS tagger is very useful because of the following two reasons: 1) Words like nouns and pronouns usually do not contain any sentiment. It is able to filter out such words with the
help of a POS tagger; 2) A POS tagger can also be used to distinguish words that can be

used in different parts of speech.

NEGATIVE PHRASE IDENTIFICATION:

Words such as adjectives and verbs are able to convey opposite sentiment
with the help of negative prefixes. For instance, consider the following sentence that was
found in an electronic device's review: "The built in speaker also has its uses but so far
nothing revolutionary." The word, "revolutionary" is a positive word according to the list in.
However, the phrase "nothing revolutionary" gives more or less negative feelings.
Therefore, it is crucial to identify such phrases. In this work, there are two types of phrases
have been identified, namely negation-of-adjective (NOA) and negation-of-verb (NOV).

CONCLUSION:

**Sentiment analysis deals with the classification of texts based on the sentiments they contain. This article focuses on a typical sentiment analysis model consisting of three
core steps, namely data preparation, review analysis and sentiment classification, and
describes representative techniques involved in those steps.
Sentiment analysis is an emerging research area in text mining and computational**

linguistics, and has attracted considerable research attention in the past few years.
Future research shall explore sophisticated methods for opinion and product feature
extraction, as well as new classification models that can address the ordered labels
property in rating inference. Applications that utilize results from sentiment analysis
is also expected to emerge in the near future.