Sentiment Analysis

What is Sentiment Analysis?

Sentiment Analysis

- It is the process of determining the emotional tone behind a series of words, used to gain an understanding of the the attitudes, opinions and emotions expressed.
- Facts are objective while opinions are subjective.

Why should we do it?

Why?

- To know the public opinion.
- The Obama administration used sentiment analysis to gauge public opinion to policy announcements and campaign messages ahead of 2012 presidential election.

Experiment - 1

Analyzing a book

Experiment - 2

Comparing News Sites

Experiment - 3

Analyzing Movie Reviews

How is it done?

Three Methods

- Knowledge based
- Statistical
- Hybrid

NLTK

Naive Bayes

Version 1

<u>First version</u>

Maximum Entropy

Version 2

<u>Maximum Entropy</u>

Bigram

Vader

Valence Aware Dictionary for sEntiment Reasoning

Vader

Challenges

Subjectiveness

- What is positive to one person might be negative to another person.
- This causes ambiguity

Grouping

- NOT BAD
- To an extent addressed by bigrams

Context and Polarity

- All utterances are uttered at some point in time, in some place, by and to some people, you get the point. All utterances are uttered in context.
- Absolutely nothing!
- Everything of it.

Irony and Sarcasm

- At the moment humans are better at sensing sarcasm (unless you are Sheldon).
- Yeah, right.

