

Sentiment Analysis Classification Tasks

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- Provide overview of sentiment classification tasks
- Understand difficulty in annotating sentiment
- Be exposed to different sentiment strategies
- Able to select suitable approach to achieve specific sentiment goal

What is Sentiment Analysis?

- Using computational methods to extract and quantify subjective opinions
- Applied to user reviews, customer feedback, survey responses among others
- Desired in industry to help evaluate products
- Fun source of research into semantic usage of language

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- What features indicate this?

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- What features indicate this?
- What are some difficulties?

How do we develop models for sentiment?

- Supervised learning task
- Annotate data for various types of sentiment
- Feature engineering
- Semantic understanding

- Document level
- Sentence level
- Aspect based
- Multilingual
- Financial
- Abusive language

- Annotation schemes
- Human bias
- Domain specific properties
- Linguistic Issues (e.g. negation)
- Class imbalance

Papers:

Twitter as a Corpus for Sentiment Analysis and Opinion Mining

Detection of Abusive Language: the Problem of Biased Datasets

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- Document vs Sentence
- Classification Types
 - Polarity (e.g. positive, neutral, negative)
 - Classification (e.g. 1 star, buy, would recommend)

Papers:

Thumbs up? Sentiment Classification using Machine Learning Techniques
Determining the sentiment of opinions

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- Which specific product is it?
- What is the sentiment of battery?
- What is the sentiment of camera?

Papers:

NLANGP at SemEval-2016 Task 5: Improving Aspect Based Sentiment Analysis using Neural Network Features

- How transferable are sentiment techniques across languages?
- What variation exists in how sentiment is expressed?

Papers:

Multilingual Multi-class Sentiment Classification Using Convolutional Neural Networks

- To what extent can news be used to predict financial markets?
- How effective are different domains?
- Within what time frames is information pertinent?

Papers:

Fortia-FBK at SemEval-2017 Task 5: Bullish or Bearish? Inferring Sentiment towards Brands from Financial News Headlines

- What biases exist in the use of languages?
- How is abusive language expressed?
- How is abusive language perceived?
- How influential are topics on abusive language identification?

Papers:

Reducing Gender Bias in Abusive Language Detection

- Numerous shared tasks provide extensive resources
- Large interest in social media reviews
- Extensive use of many mediums of communication (structured to unstructured)
- Growing interesting in other languages other than English
- Active area of research in both industry and academia resulting in numerous approaches on same data sets

- Detecting abusive language in Twitter
- Predicting stock market movements based on news headlines
- Predicting ratings of recipes based on user reviews

Questions?