

# Sentiment Analysis: Introduction and State of the Art overview

Adam Westerski

# Overview

- Basics
- Techniques
- Appliances
- Future work

# Basics

- Opinions and facts
- Opinion mining vs. Topic-based mining
- Mining the Web (community spaces)

# Basics

## Goals for opinion mining

- Text classification: subjective/objective
- Text polarity: positive/negative/neutral
- Object features and their rating

# Basics

## Opinion expression types

- Direct opinions vs. comparisons
- General vs. in depth
- Context dependent
- Querying formula
- Vocabulary and grammar dependent

# Techniques

- Document level opinion mining
- Sentence level opinion mining
- Feature based opinion mining
  - machine learning
  - topic recognition techniques

# Appliances

- Product benchmarking, market intelligence
- Advertisement placement
- Individual needs
- Opinion search and retrieval
- Opinion spam detection

# Future work

- Many solutions very context dependent
- Companies putting a lot of effort into development of sentiment analysis
- New algorithms
- Mixture of many methods



# Interesting literature

- **Overview**

Liu, B., Opinion Mining and Summarization, World Wide Web Conference, Beijing, China, 2008

Opinion Mining bibliography by Jan Wiebe,  
<http://www.cs.pitt.edu/~wiebe/subjectivityBib.html>

- **Selected papers**

Balahur, A., Montoyo, A., “Pros and Cons: Sentiment Analysis Appliend to Multilingual, Multi-genre Texts”

Jindal, N., Liu, B., “Review Spam Detection”

**Q&A**