



Computational Social Science

Natural Language Processing: Jordan
Boyd-Graber
University of Maryland

INTRODUCTION

Sentiment Analysis

ENTREPRENEURSCALE SOCIAL MEDIA ANALYTICS

NETBASE

Understanding Consumer Concerns

Top Emotions



Top Hashtags



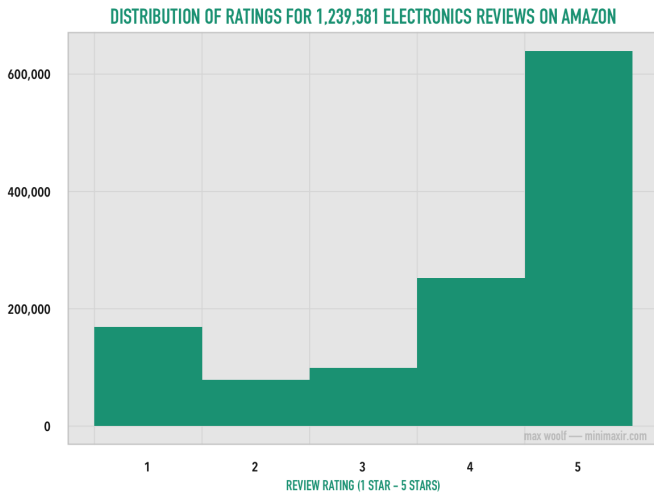
- “Sick” and “E. coli scare” conversation bubbling up due to negative press
- People will still eat Chipotle despite the #ecoli scare

#NetBaseLIVE

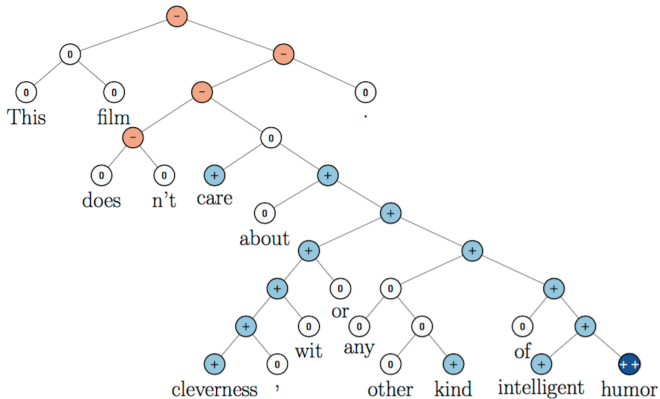
NETBASE™

- Given a piece of text, does it have positive or negative sentiment?
- Data: product reviews, social media

Found Data



Syntactic Annotations



Targeted vs. Untargeted Sentiment Analysis

She began to love [**miley ray cyrus**]₊ since 2013 ;)

Some chocolate a top of ice cream and [**taylor swift**]₊ songs. Best remedy to help cure the pain.

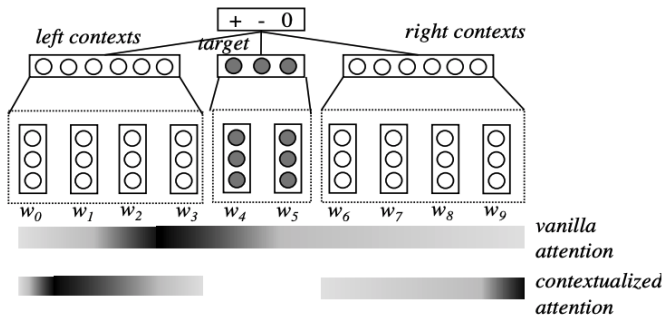
Does VMware fusion support [**Windows 7**]_o yet?

[**nick cannon**]₋ face is annoying!!!!!!

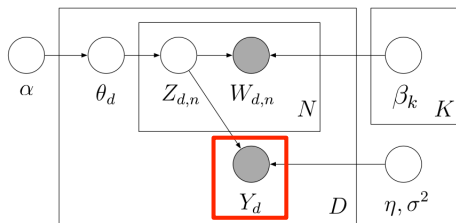
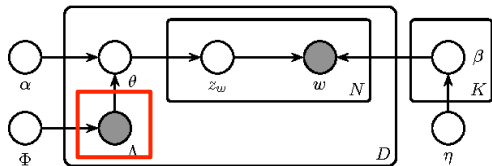
I have no interest in seeing [**britney spears**]₋ do anything.

What is the sentiment about?

Deep Models



Little Data? Graphical Models



- Is your prediction conditioned on text or vice-versa?
- Upstream: More interpretable, easier to train
- Downstream: Better prediction