Given a piece of text, does it have positive or negative sentiment?

- Data: product reviews, social media

Understanding Consumer Concerns

Top Emotions
- nasty
- enjoy
- hate
- bad
- sick
- nice
- amazing
- not better
- not like
- trash
- thank
- addicted
- E. coli scare

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

DISTRIBUTION OF RATINGS FOR 1,239,581 ELECTRONICS REVIEWS ON AMAZON

REVIEW RATING (1 STAR – 5 STARS)
Syntactic Annotations
Targeted vs. Untargeted Sentiment Analysis

She began to love [miley ray cyrus]_+ since 2013 :)
Some chocolate a tup of ice cream and [taylor swift]_+ songs. Best remedy to help cure the pain.
Does Vmware fusion support [Windows 7]_0 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