



FRONT PAGE

Dr. Kelly Epley

The most
effective way to
get readers'
attention is to
make them **feel**
something



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make them **feel**
something



Abigail Fisher, a white
Texan who has sued
University of Texas
not admitting her,
the policy that led
her rejection also
Asian-Americans

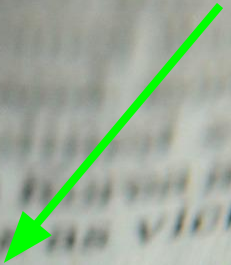
sophomore who is hal
d of her high school
had white friends
gling and minor
were doing just fi
Varghese, an In
wyer and activ
she hoped

AR

CANCER?

crease to 22 million new cases and
at the same time — a 75 per cent increase
significant within 20 years
new cases a year about the same

SCARY!



conscious admissions, their
kept artificially low to
a more demographically bal
campus. A lawsuit pending
Princeton alleges dis
mination on grounds that a
ants were admitted with lesse
entials. The Department o
ation's Office for Civil Right
received complaints last ye
st Princeton and, since wit
n, Harvard.
the other hand, Filipin
dians, Pacific Islanders a
Asian-Americans contin
nt from policies that ta
y into account.

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Sales of Fi

ow much
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supp
Shirley
you

Research shows:



Research shows:



- Negative emotion headlines are quicker to go *viral*¹

Research shows:



- Negative emotion headlines are quicker to go *viral*¹
- Positive emotion headlines get more social media interactions over *time*²

How do you optimize engagement?



front_page

- Collects headlines from news websites
- Supplies a detailed report and summary of the emotion content

FRONT PAGE DEMO :

SLATE

* DUD-FREE

The Trouble With Being an Asian Guy on Tinder

😊 Joy:91.0%

😬 Surprise:83.0%

Word Polarities:

{ 'neg': 0.252, 'neu': 0.748, 'pos': 0.0, 'compound': -0.4019 }

Chance the Rapper Does Not Want to Perform as a Hologram After He Dies

😞 Anger:68.0%

😬 Disgust:71.0%

😨 Fear:83.0%

😊 Joy:53.0%

😞 Sadness:98.0%

😬 Surprise:81.0%

Word Polarities:

{ 'neg': 0.086, 'neu': 0.773, 'pos': 0.141, 'compound': 0.1969 }

What's So Scary About Our Likely Next Director of National Intelligence

😞 Anger:56.00000000000001%

😨 Fear:68.0%

😞 Sadness:86.0%

😬 Surprise:76.0%

Word Polarities:

{ 'neg': 0.224, 'neu': 0.577, 'pos': 0.199, 'compound': -0.101 }

It's Startling How Much Veronica Mars Anticipated #MeToo

😊 Joy:73.0%

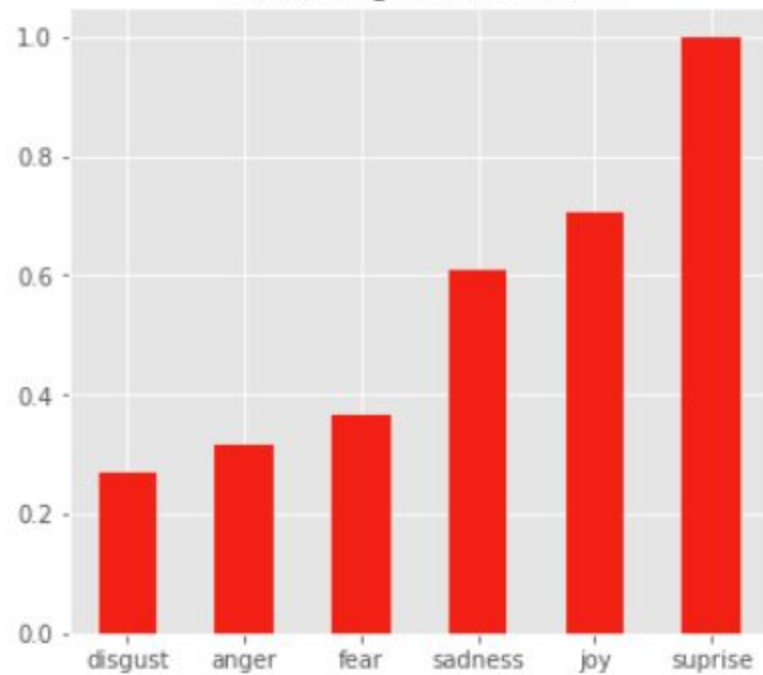
😞 Sadness:81.0%

😬 Surprise:84.0%

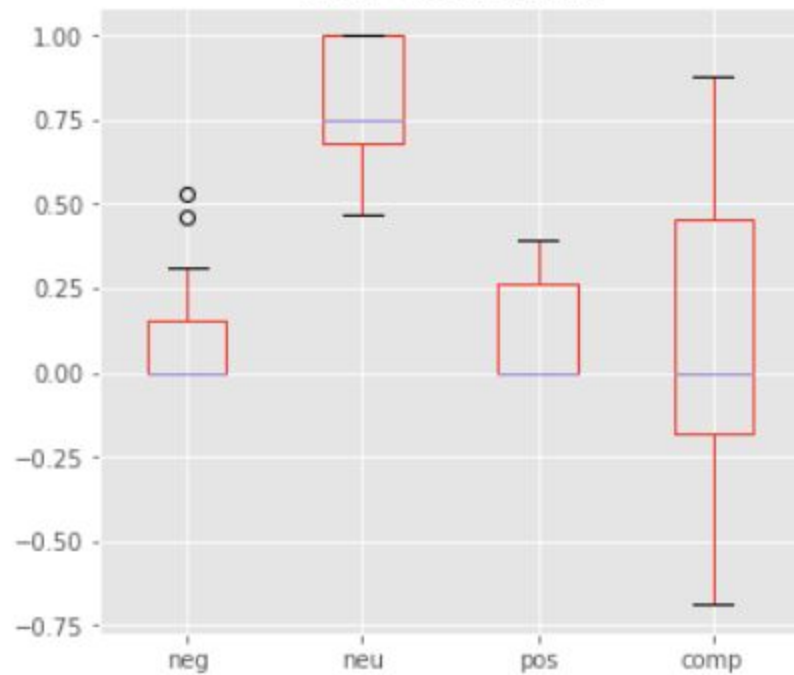
Word Polarities:

{ 'neg': 0.0, 'neu': 0.843, 'pos': 0.157, 'compound': 0.0772 }

Percentage of Headlines
Containing Each Emotion



Positive, Negative, and Neutral
Word Distributions





MAKING
FRONT PAGE

emotion detection

emotion detection

- Lexicons such as [WordNet](#)

emotion detection

- Lexicons such as WordNet
 - 85% label correspondence!

emotion detection

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 - ... *when the lexicon words are present*

emotion detection

- Lexicons such as WordNet
 - 86% label correspondence!
 - ... *when the lexicon words are present*
- Lexicon words:

emotion detection

- Lexicons such as WordNet
 - 85% label correspondence!
 - ... *when the lexicon words are present*
- Lexicon words:
 - Were present in less than 10% of data

emotion detection

- Lexicons such as WordNet
 - 85% label correspondence!
 - ... *when the lexicon words are present*
- Lexicon words:
 - Were present in less than 10% of data
 - Usually couldn't catch multiple labels

Can we *automate* emotion detection?

- With a lexicon alone:
 - Jaccard Score: 0.02

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- With a lexicon alone:
 - Jaccard Score: 0.02

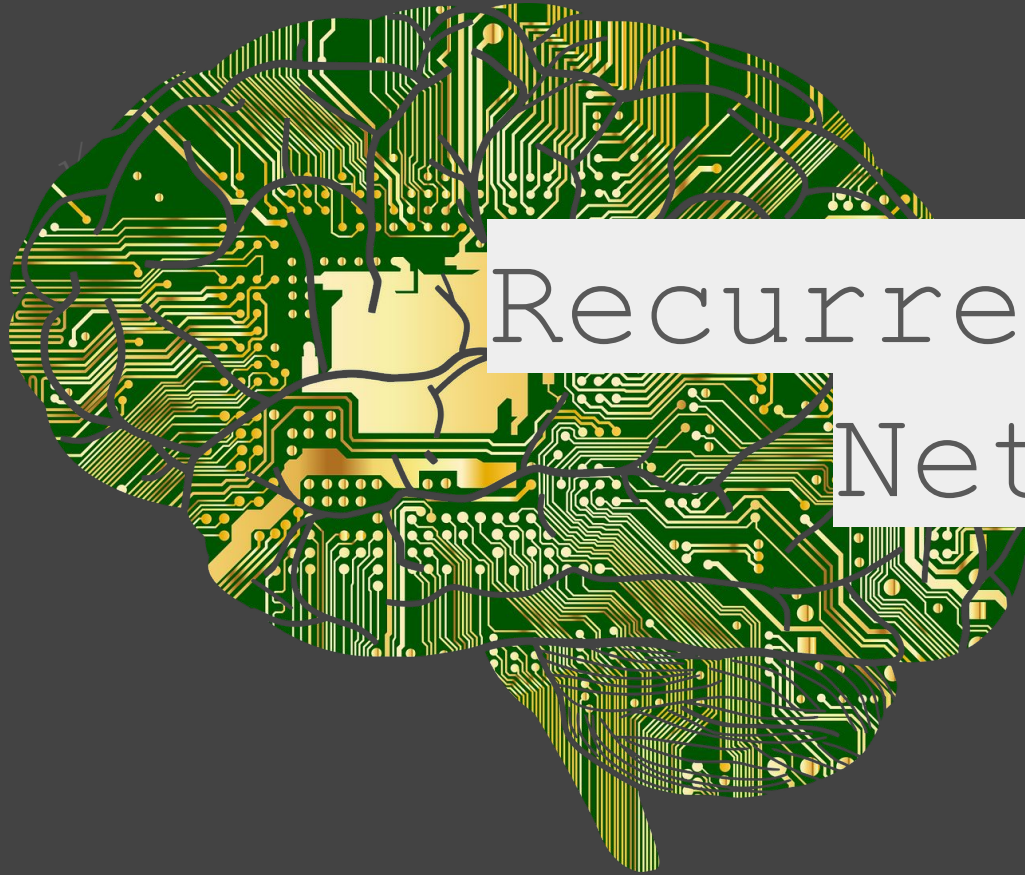
JACCARD SCORE: # of correct labels out of total
predictions

Can we *automate* emotion detection?

- With a lexicon alone:
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JACCARD SCORE: # of correct labels out of total
predictions

We can do better...



Recurrent Neural Network

Recurrent Neural Network

- RNNs are ideal for *natural language processing*

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 - Designed to handle sequential data

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 - Long Short Term Memory layers retain information about previously seen data

Recurrent Neural Network

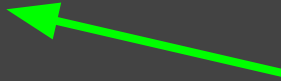
- RNNs are ideal for *natural language processing*
 - Designed to handle sequential data
 - Long Short Term Memory layers retain information about previously seen data
 - Capable learning how emotion language works: words, syntax, and context

Jaccard Scores

- Lexicon: 0.02
- RNN: 0.71

Jaccard Scores

- Lexicon: 0.02
- **RNN: 0.71**



```
front_page()
```

source attribute:

- 4 options:
 - 'npr'
 - 'slate'
 - 'fox'
 - 'breitbart'

methods:

- get_headlines
- details
 - label scores
 - VADER valence
- summary

Thanks



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is on [Github](#)