



EMOTION DETECTION IN TWITTER POSTS

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SOCIAL MEDIA IN OUR DAILY LIFE

<https://www.bls.gov/news.release/atus.t12.htm>

<https://www.broadbandsearch.net/blog/average-daily-time-on-social-media>



26 years 5 months



8 years 4 months



6 years 8 months



3 years 7 months

EMOTION DETECTION ON SOCIAL MEDIA

- Mental Health
- Public Safety
- Customer Service
- Business Strategies

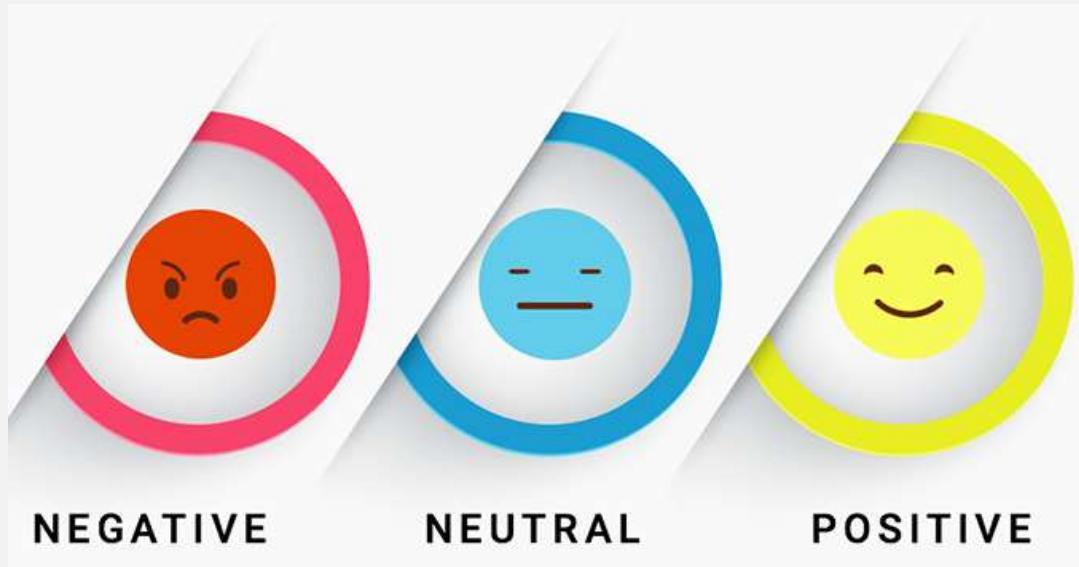




EMOTION VS. SENTIMENT

Sentiment is a general thought, feeling, or sense.

Emotion is a person's internal state of being and involuntary physiological response to an object or a situation, based on or tied to physical state and sensory data.



SENTIMENT ANALYSIS

- Informs user's reaction polarity
- Fails to describe the exact feelings of the customers and the intensity of their reaction

<https://www.newgenapps.com/blog/the-secret-way-of-measuring-customer-emotions-social-media-sentiment-analysis>

<https://owips.com/clipart-14435986>

EMOTION ANALYSIS

- An advanced form of sentiment analysis
- Analyzes human emotions
- Tries to identify the proper emotion from context



<https://www.newgenapps.com/blog/the-secret-way-of-measuring-customer-emotions-social-media-sentiment-analysis>

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EKMAN'S EMOTION MODEL



Anger



Disgust



Fear



Sadness



Happiness

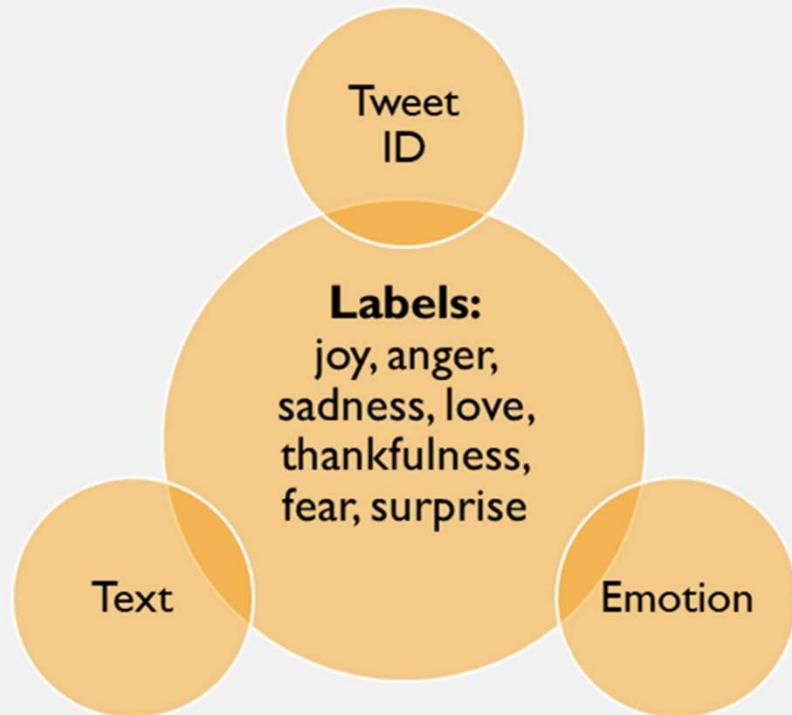


Surprise

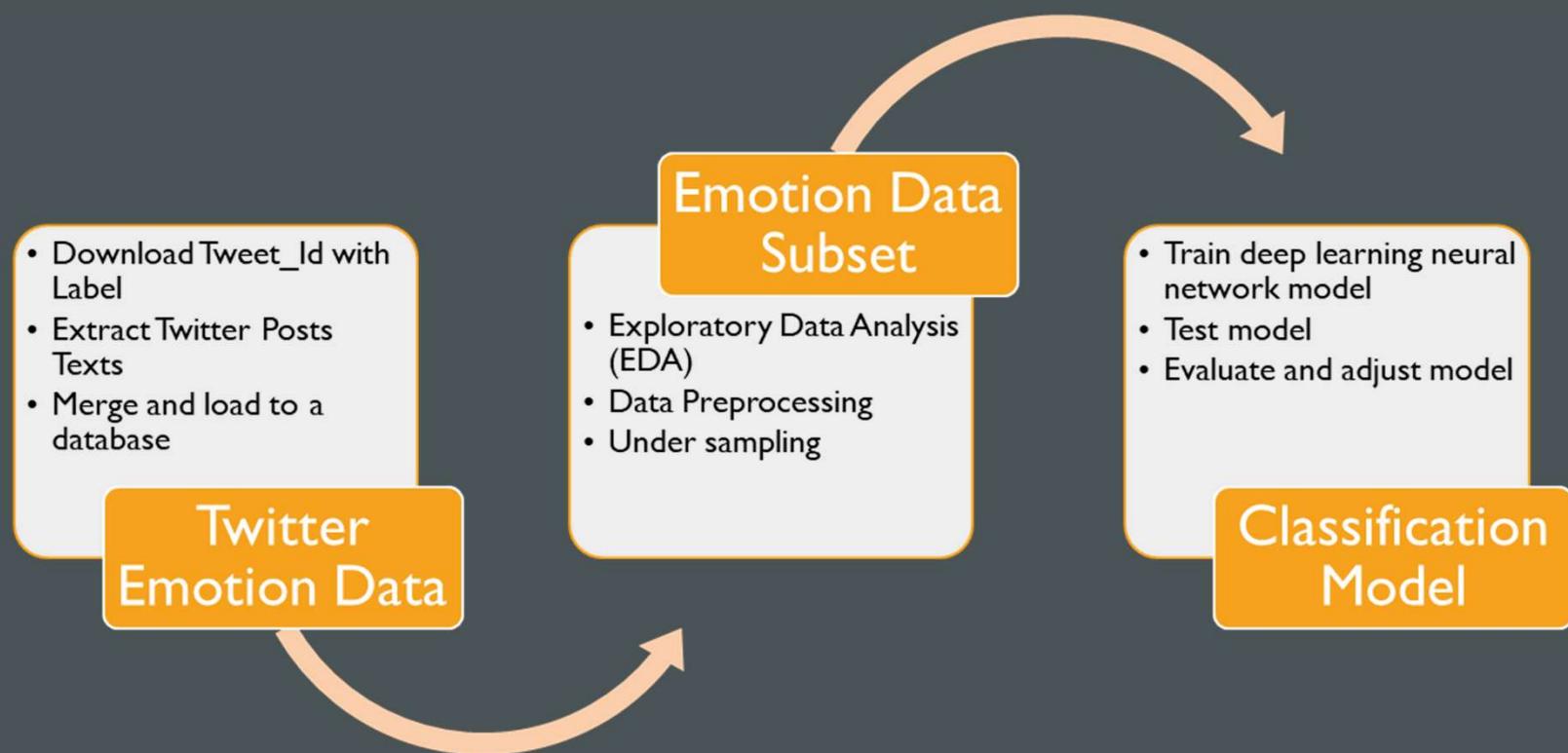
TWITTER EMOTION DATASET

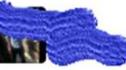
- [Twitter Emotion SocialCom Wang](#): contains tweet id and label.
- Text was extracted from Twitter
- Attributes: Id, Text, Label
- 1,339,794 observations

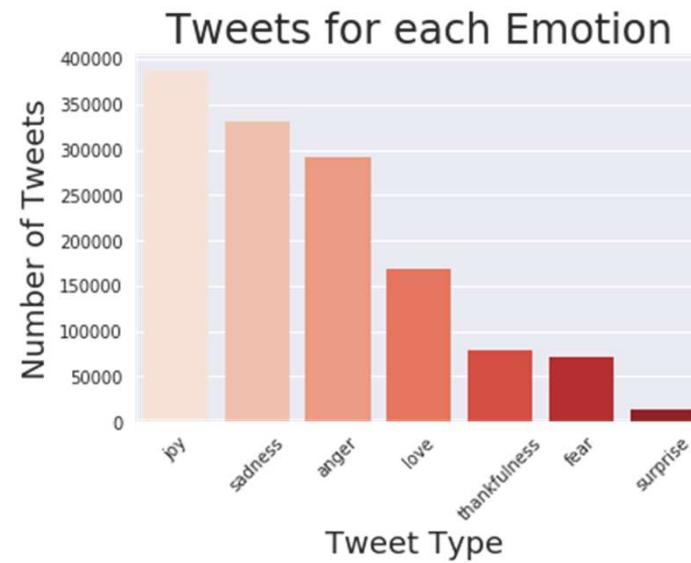
* http://knoesis.org/sites/default/files/wenbo_socialcom_2012_0.pdf



METHODOLOGY



-  [REDACTED] @FentB · 2h
When ppl be talking and ain't talking bout shit #STFU
-  [REDACTED] Follow
I think my gramma got die of beaties
-  [REDACTED] Follow
I can't date a girl who is lack toe tolerance.
We couldn't even go out for ice cream!
-  [REDACTED] Replying to @TeeJayR31
Thank god 🙏 what would we do if our men couldn't wear falsies out at sea?? 😅😅😅 #sarcasm #clownworld



CHALLENGES

MODEL PERFORMANCE:

- Baseline accuracy is 28% (lowest score expected for this dataset.)
- Model Accuracy = 63%
- Cohen Kappa Score = 0.57 (moderate agreement)
- 17% of the test data was not classified

REMARKS

- Model Accuracy is 35% higher than the baseline.
- Cohen Kappa Score value falls under the “Moderate Agreement” level.
- The model results are good with room for improvement.

Original Text	Actual	Predicted
I'm about to delete and unfollow people who refuse to use proper grammar and proper spelling #notrocketscience #annoyed #canhandleit	Anger	Anger
so stressed, i can barely breathe #nervous #terrified #abouttocracy	Fear	Fear
I'm ready to give up on life. I'm tired of all the disappointment that surrounds me. #depressed	Sadness	Sadness
i love my life. i love my family #happy	Joy	Joy

Original Text	Actual	Predicted
Still no access to my articles. Want to burn the world down. #Rage	Anger	Sadness
Just think about all the times we have shared together... #depressed	Sadness	Anger
It felt like Christmas day cause the family are over for tea and I am watching Christmas movies #excited	Joy	Sadness
Work related tensions and stress and continuous thinking about it gave me further stress and tensions and finally severe #anxiety	Fear	Joy

CLASSIFICATION EXAMPLES

RECOMMENDATIONS



Bigger dataset



Quality of annotations



Oversampling

Thank You!

// FLATIRON SCHOOL