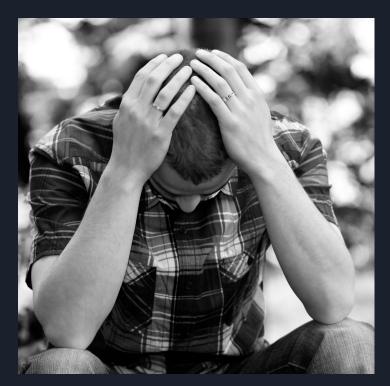
# Depression

Social Media Analysis

#### Problem Statement

A nonprofit agency focused on mental health and depression wants a way to analyze Twitter data to assess for depression in individuals.

- leading cause of disability for adults in the US aged
  15-44
- Over 16.1 million adults
- Only 61% of adults receive treatment
- 60% of individuals who commit suicide had a mood disorde



## **Business Value**

- Help identify depressed individuals sooner
- Help combat depression



# Methodology

- Topic Analysis
- Sentiment Analysis
- LSTM Model

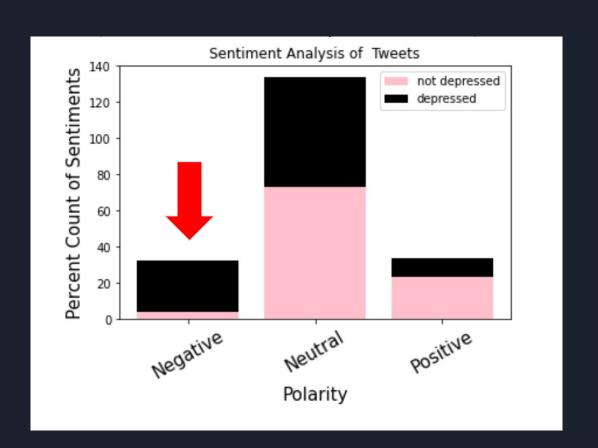
**Word Cloud for Non-Depressed Tweets** 



# Depressed Words



## Tweets



#### Test Results

- 90% accuracy on test and training data
- 98% recall for depressed tweets
- When tested on new data gathered from twitter, struggled with telling the difference between informational posts and actually depressed posts



#### Recommendations

Respond to users who say they're feeling depressed, worthless, or hurting with:

- empathetic responses
- informative posts
- advertisements about the benefits of counseling or this agency.

Feel so empty.. Worthless.. Failure.. Hopeless.. Unwanted.. A joke.. Fuck up.. Embarrassment.. #depression #borderlinepersonality #mentalillness #bipolar #anxiety

## Recommendations

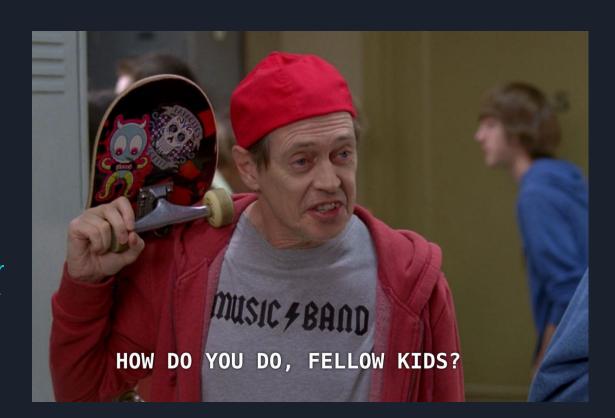
Increase social media presence.



## Recommendations

#### Match language

uhhh idk if yall wanna see me rant but like i kinda need to do so sorry in advanced: I swear every time i talk about my mental health irl no one cares? Like ppl just tell me to get over it and to stop being depressed. I can't control my depression, no one can and its +



#### Future Work

- create a model that codes tweets for depression criteria
- a model that does better at seeing the difference between informational tweets about depression and depressed tweets
- possibly creating a bot that could reach out to individuals seen as at-risk of depression
- a model that flags suicidal comments or classifies risk

