



Classifying Mental Health: The Reddit Proxy

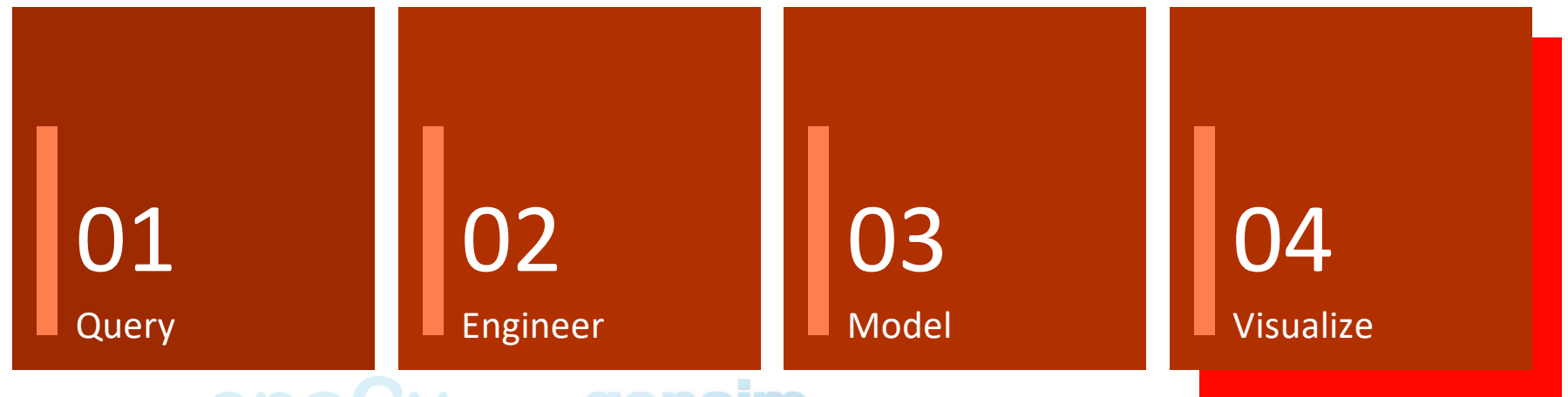
Bryan Ross

IMPORTANCE



- Patient insights outside of appointments
- Enhancements in:
 - Diagnostic screening
 - Treatment progression
 - Risk prevention

METHODOLOGY



spaCy

gensim

pandas

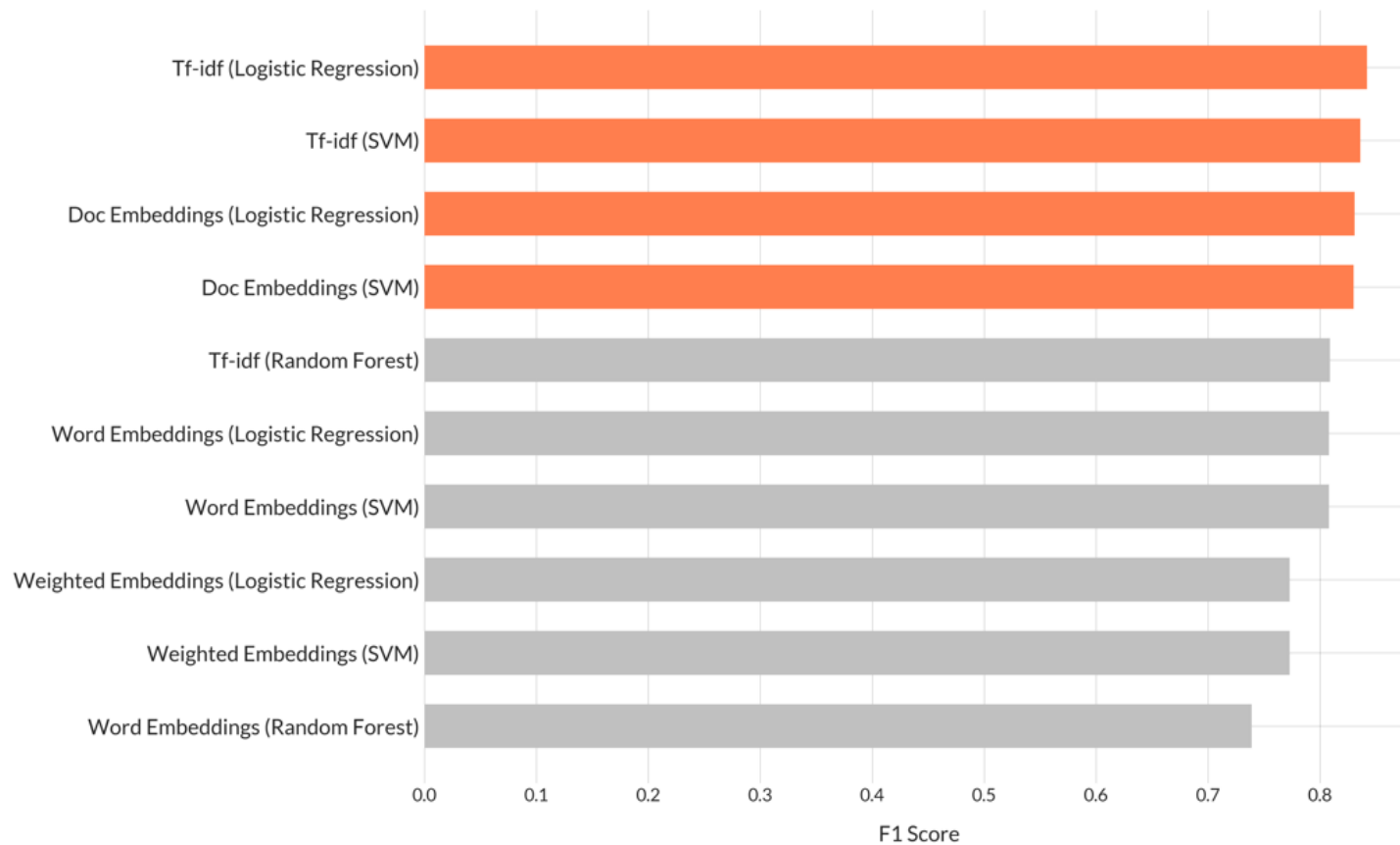
scikit
learn



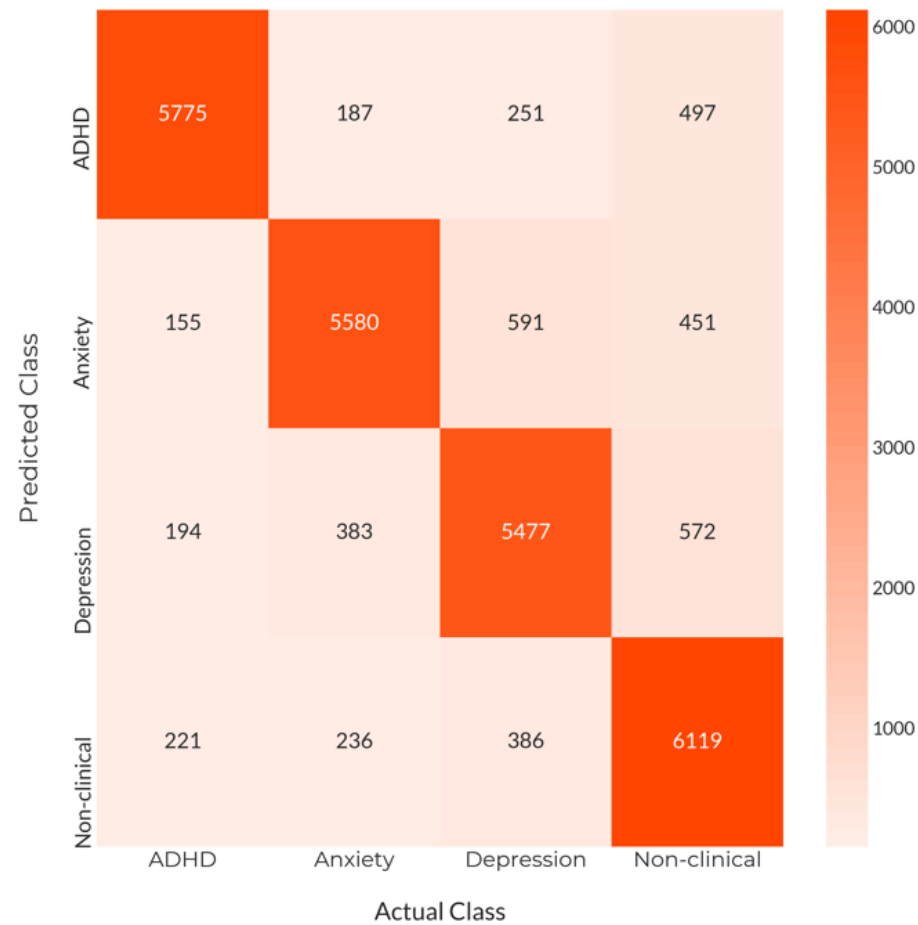
SIMPLEST IS BEST



Initial Validation Models - Top 10



RESULTS



- Biggest strength: non-clinical
- Some struggles with depression & anxiety
 - Highly nuanced diagnostically

Mental Health Language Classifier

This is not meant to be a diagnostic tool.

Description

Trained on over 135,000 Reddit posts, this model classifies text into 1 of 4 groups: ADHD, anxiety, depression, or non-clinical. This current application displays the probabilities for each. For more information on the data and methods behind the model, feel free to check out my [Github](#), or [connect with me directly](#).

Instructions

How are you feeling? Write whatever is on your mind.

Things aren't going very well. I'm just not enjoying the same things that I used to, and I don't have any energy.

SUBMIT

RESET

Text Analyzed

Predictions

1. Non-clinical: 0.0%
2. Depression: 0.0%
3. ADHD: 0.0%
4. Anxiety: 0.0%

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Instructions

How are you feeling? Write whatever is on your mind.

I'm doing great|

SUBMIT

RESET

Text Analyzed

Predictions

1. Non-clinical: 0.0%
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4. Anxiety: 0.0%

FUTURE WORK



- Expand disorders
- Fine-tune custom embeddings, collect more data
- Explore other pre-trained embeddings

THANK YOU!

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Github: <https://github.com/Rossbj92>

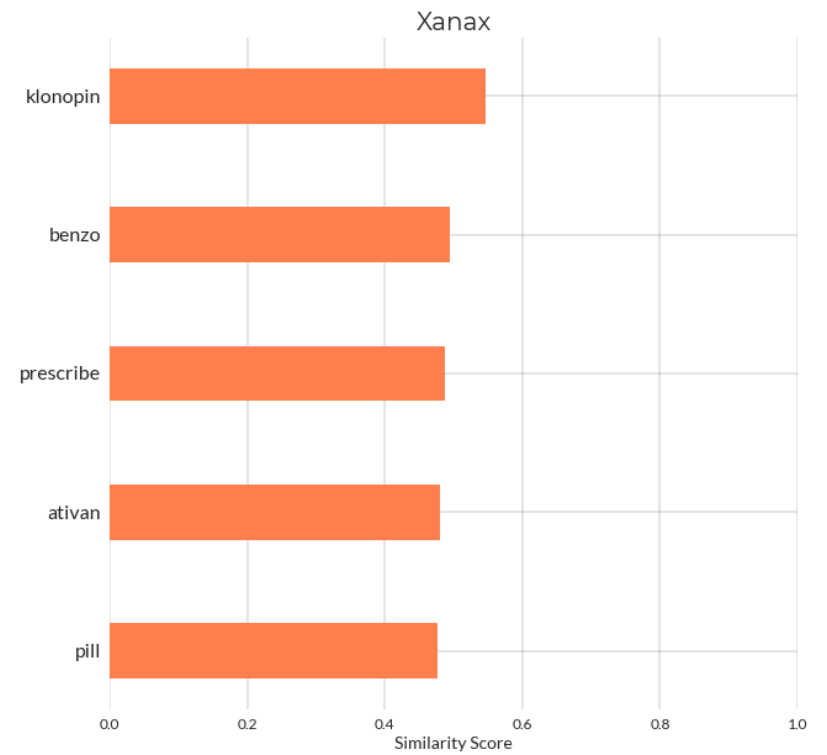
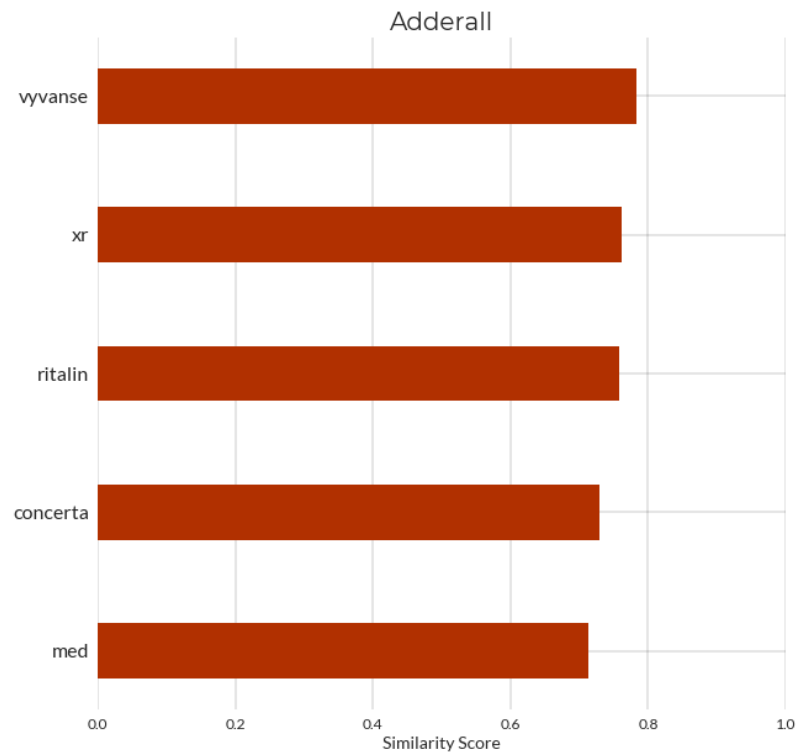
Linkedin: <https://www.linkedin.com/in/bryan-ross-07871452/>

App: <https://mental-health-classifier.herokuapp.com/>

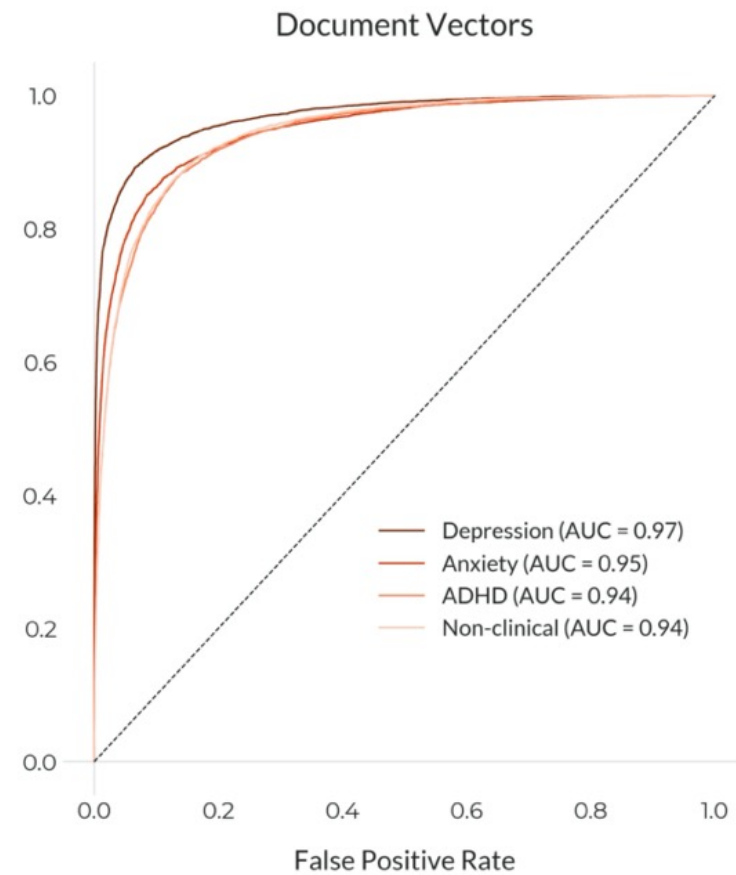
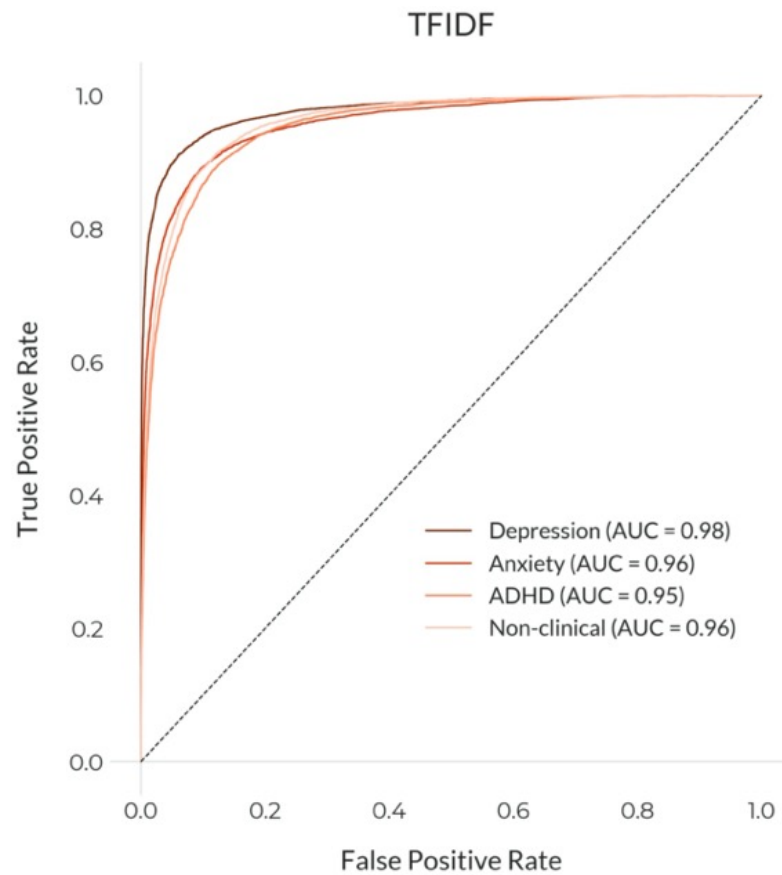
APPENDIX

FACE VALIDITY

Medication word similarities: like are with like.



TOP MODEL COMPARISON



Credits

Presentation templated by Slidesgo, icons by Flaticon, and infographics & images by Freepik