Reddit API and NLP Project

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Project Objective

Develop a natural language processing model that minimizes both false positives and negatives to predict subreddit origin.

r/Anxiety

r/Depression

Subreddit API Web Scraping

Subreddit → Post → Dataframe → CSV

Task Scheduler

Scrapes subreddit automatically

↓

20 - 40 posts every hour

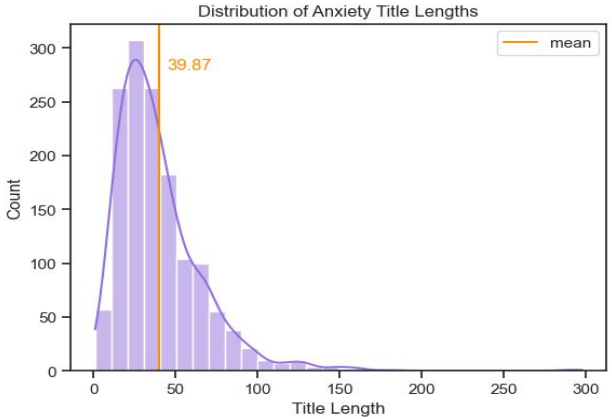
Data Cleaning

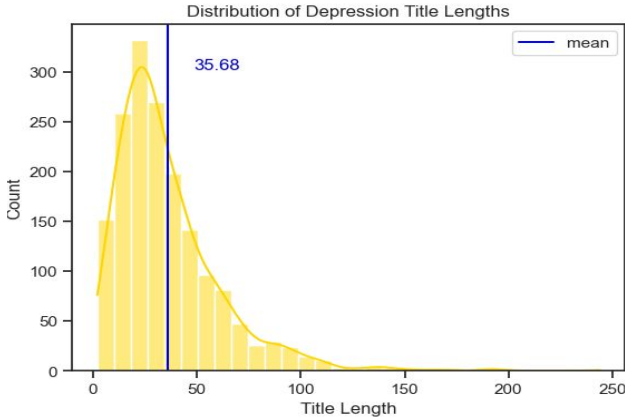
Data Dictionary

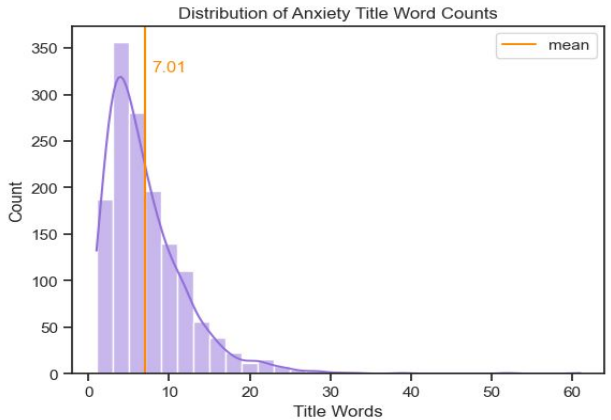
Feature	Type	Description
id	object	Post ID
subreddit	object	Reddit community
date	datetime	Date of post (yyyy-mm-dd)
title	object	Title of post
text	object	Text within a post

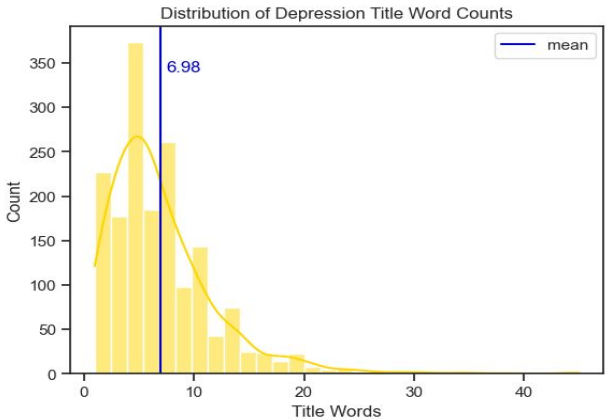
1. Remove rows with Null values
2. Convert UTC to datetime
3. Save as new CSV

Data Analysis

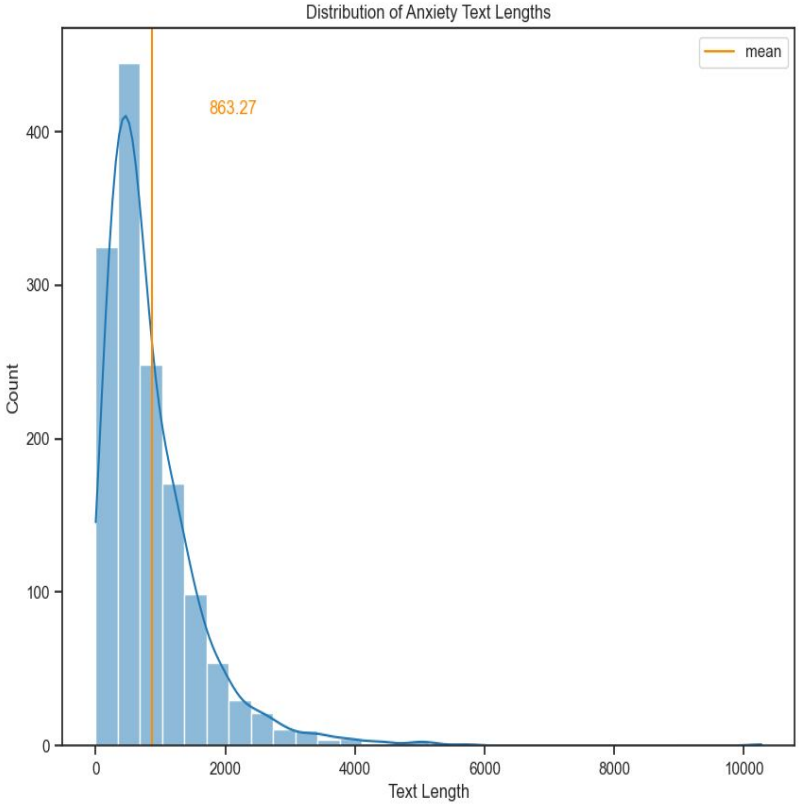


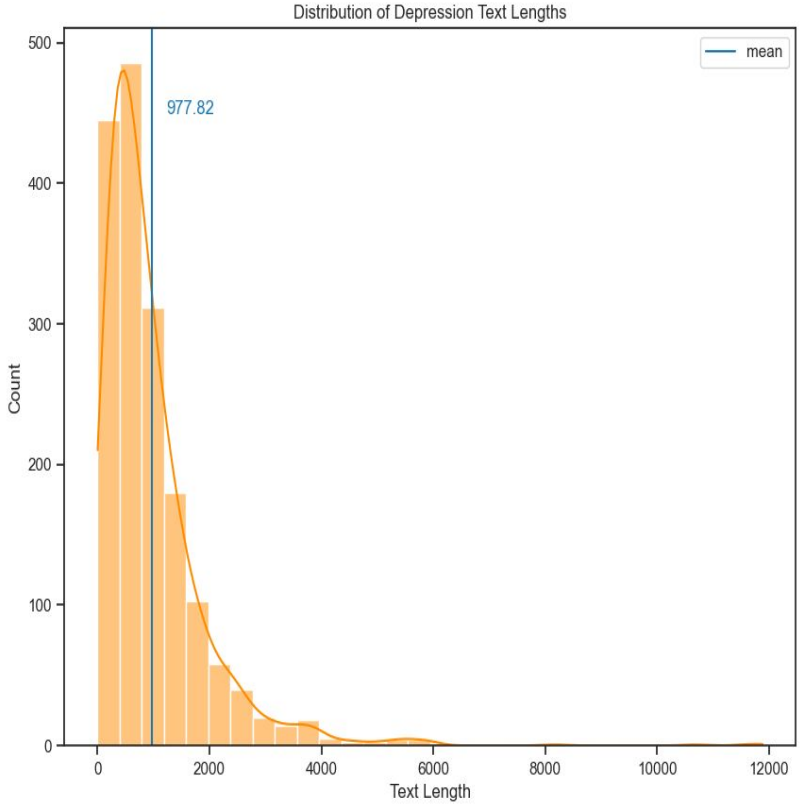






Data Analysis





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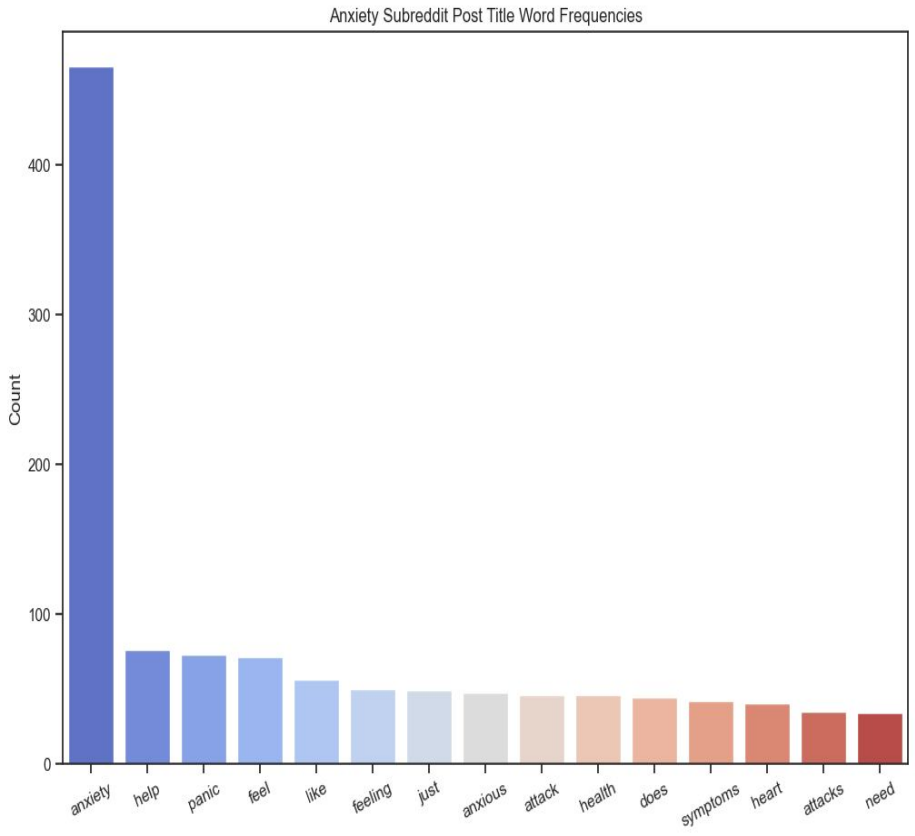
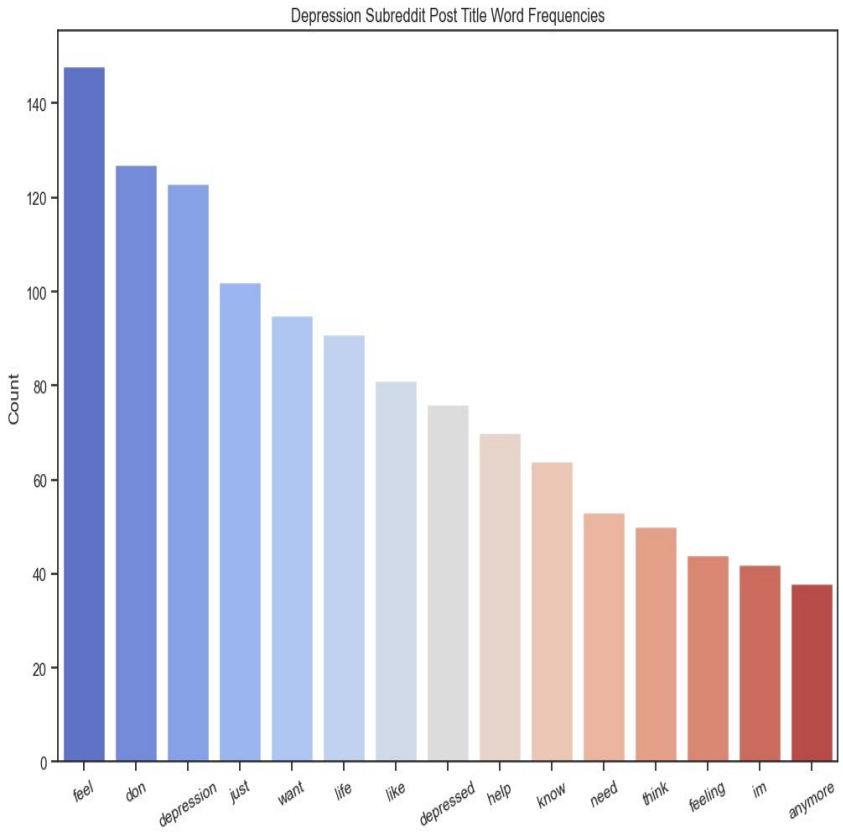
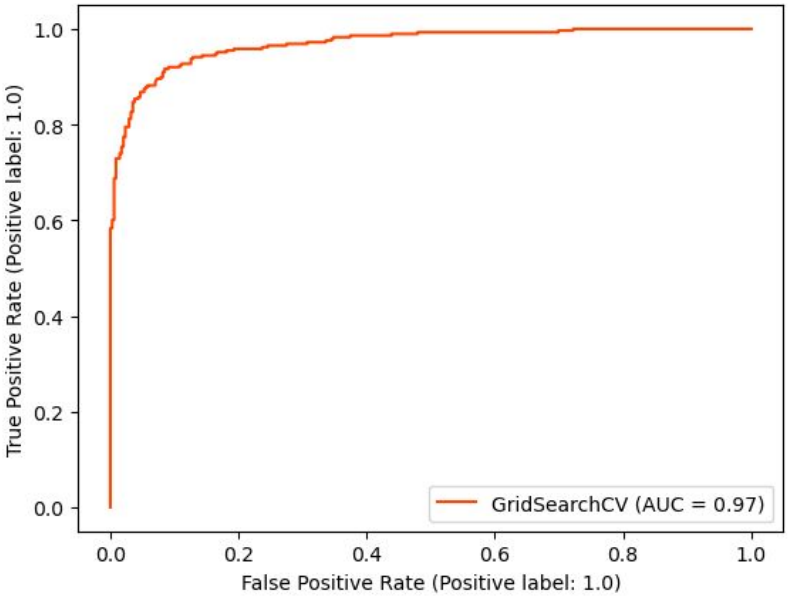




Natural Language Processing Model



Best Model

TfidfVectorizer

LogisticRegression

Achieved > 90% Accuracy

I love a good model

Conclusion

- Successfully scraped Reddit API
- Scheduled script to run automatically
- Cleaned and analyzed data
- Created and compared NLP models
- Minimized false positives and negatives

Thank You!

Questions?