# Project 3: Web APIs & NLP

By: Jayson Villena
01/18/2023

# Problem

A coworker was tasked with gathering data of individual investors and current thoughts about the market. He gathered the data from two subreddits, WallStreetBets and StockMarket. The senior data scientist likes the content but he doesn't want to utilize data from wsb, however the worker didn't label where the subreddits came from.

## Problem Statement:

Collect data from the two subreddits and create a model that can predict where the data came from and match it with the original data.

# What do we know?

- Original data
- Equal Amount

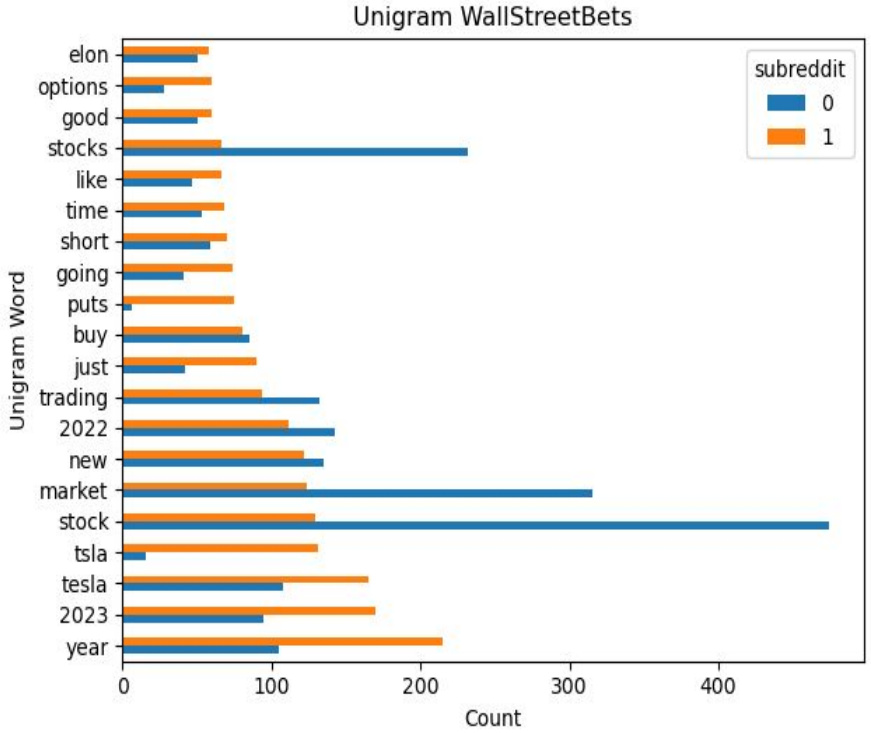
What do we need to do?

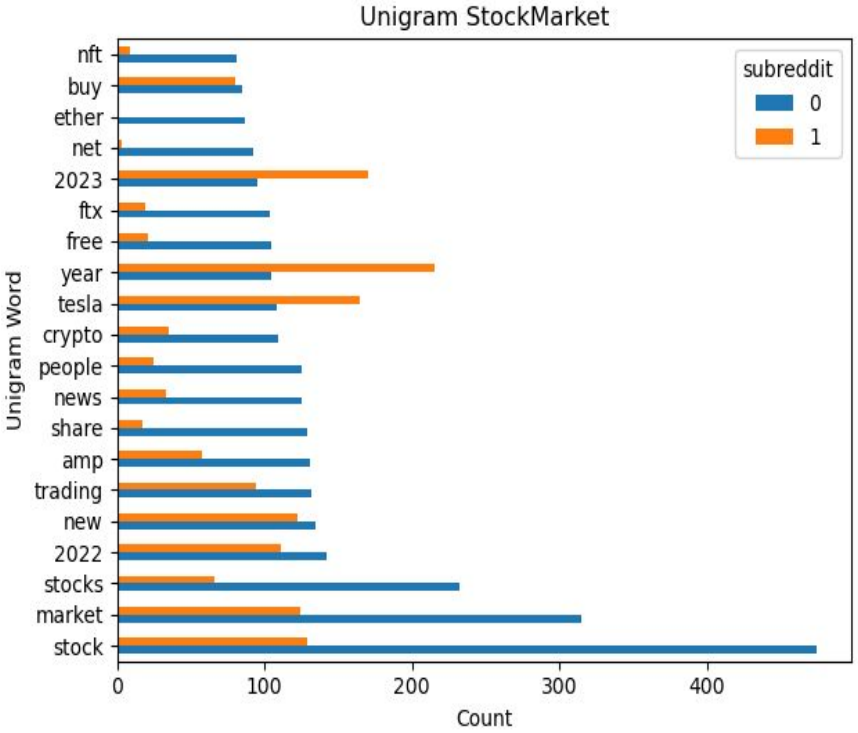
- Gather new data
- Create a predictive model
- Use model on original data

# How?

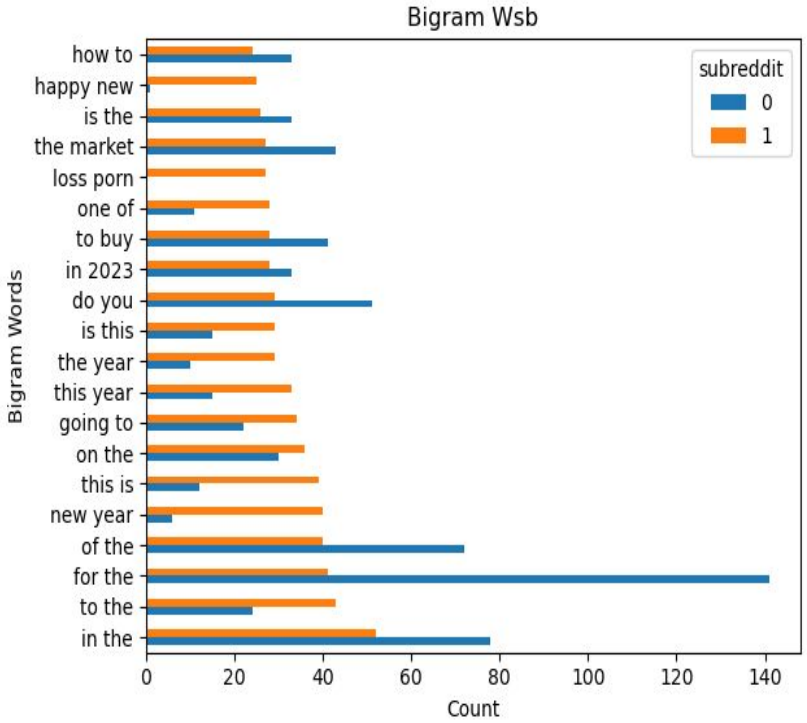
1. API
2. Preprocess and EDA
3. Model Optimization

# What are we looking for?



# Bigrams


Bigram Wsb
how to
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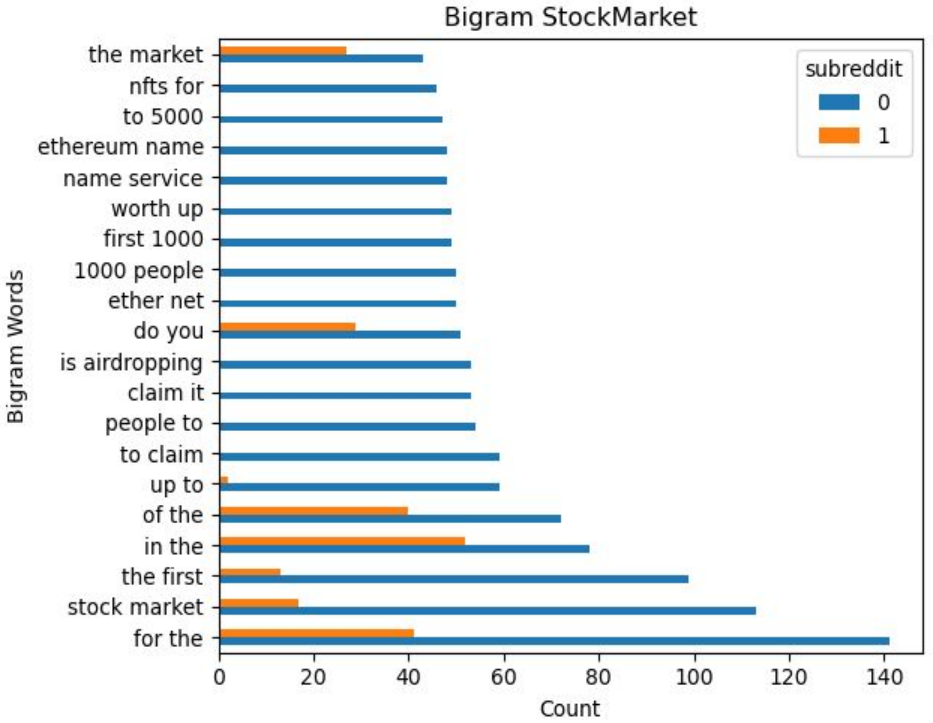
Bigram StockMarket
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Bigram Words
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Count
subreddit
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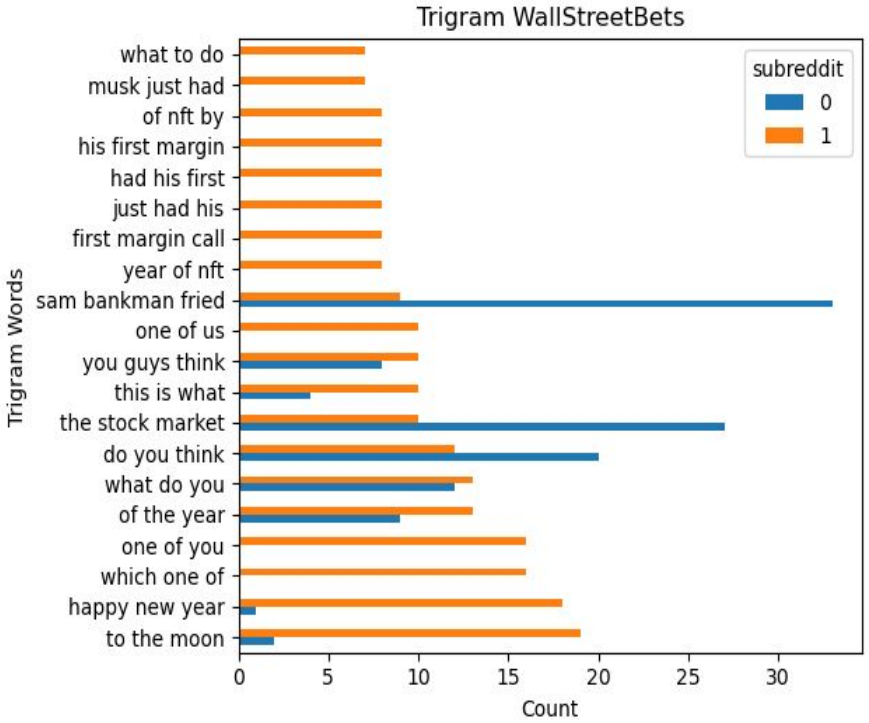
# Trigrams


Trigram WallStreetBets
Trigram Words
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of nft by
his first margin
had his first
just had his
first margin call
year of nft
sam bankman fried
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you guys think
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the stock market
do you think
what do you
of the year
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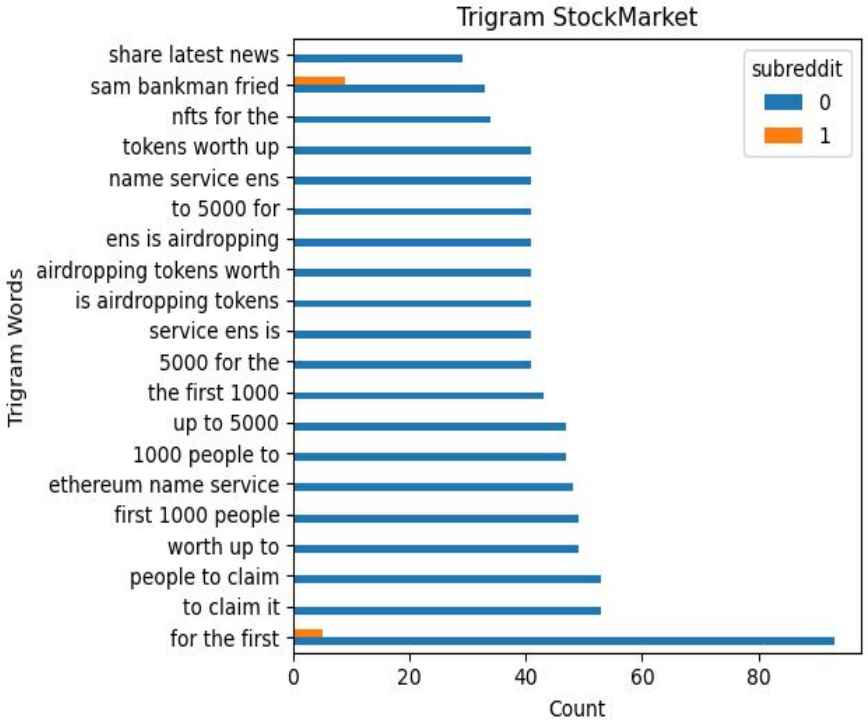
30
Count


Trigram StockMarket
Trigram Words
share latest news
sam bankman fried
nfts for the
tokens worth up
name service ens
to 5000 for
ens is airdropping
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is airdropping tokens
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5000 for the
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ethereum name service
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people to claim
to claim it
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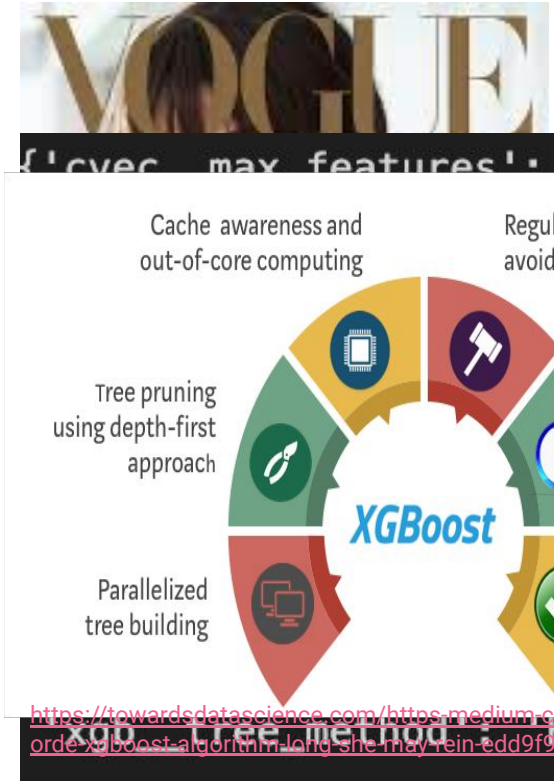
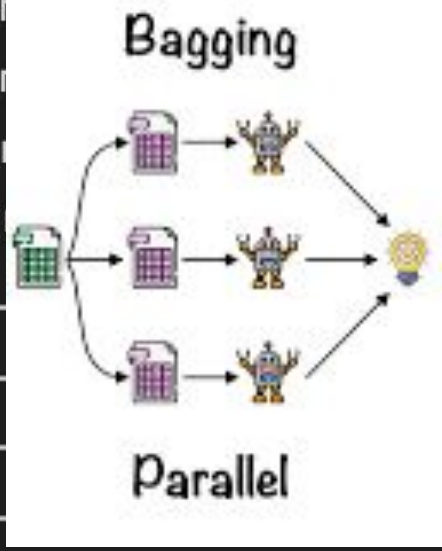
80
Count

# Modelling




https://towardsdatascience.com/https-medium-com-vishalmorde-xgboost-algorithm-long-she-may-rein-edd9f99be63d

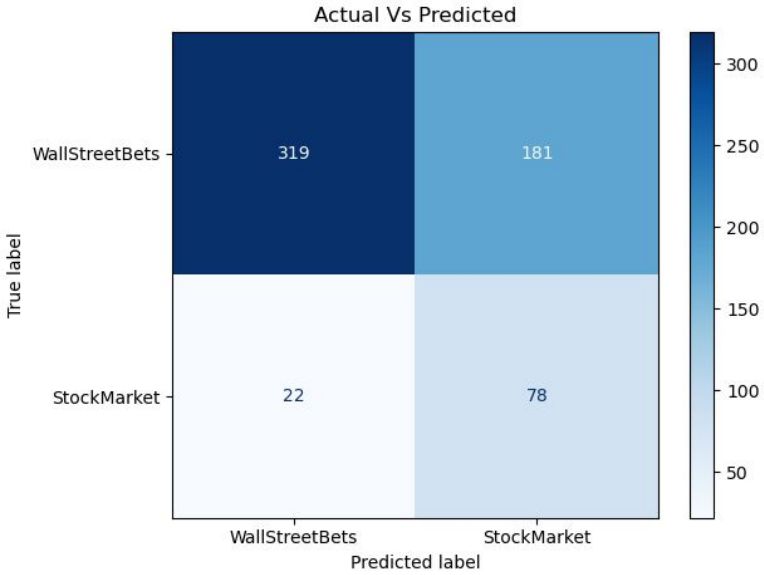
Bagging




https://towardsdatascience.com/ensemble-learning-bagging-boosting-8079e5422

# Results

XgBoost: 0.71  Bagging: 0.72




# Future:

- Better understanding of the  API
- Optimization

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