The Language of Reddit

By Charles Crocicchia

Background on the Problem

I work for a linguistic research team whose goal is to visualize patterns or trends in the rapidly developing language of the online world.

Subreddits

r/Showerthoughts

A forum where people voice their realizations or epiphanies that they have discovered independently of academic/scientific research.

r/philosophy

Where people share and discuss morals, ethics, and social observations made by prominent figures in the philosophical research community.

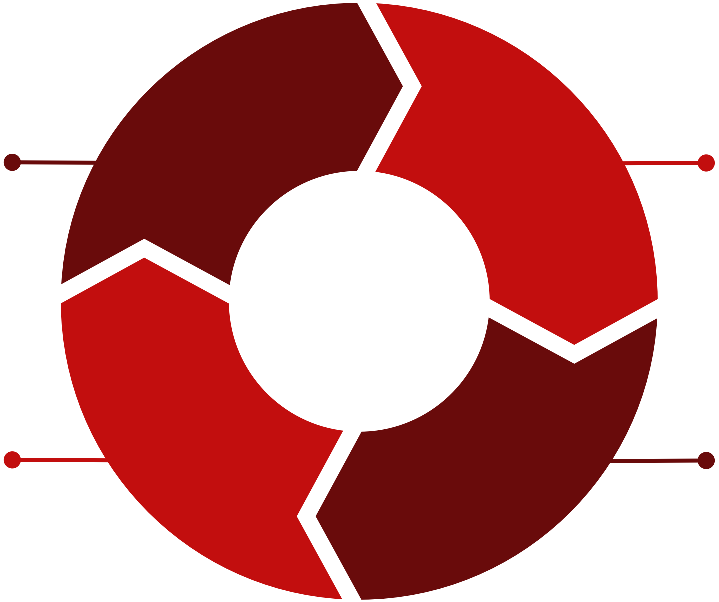
Our Question

Is there a difference between our own self-made observations and those made by established philosophers?

01

Data Collection

My Process



Automated Python Script

Fetch Data From Both Subreddits

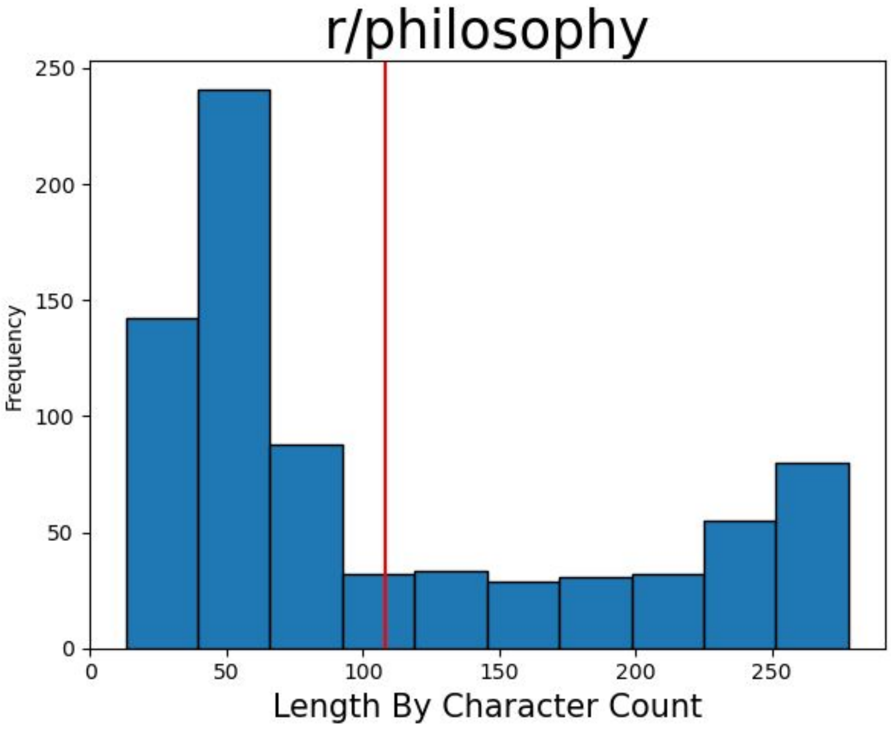
Check For Duplicate Posts Before Saving to Database

Enough Data? Never!

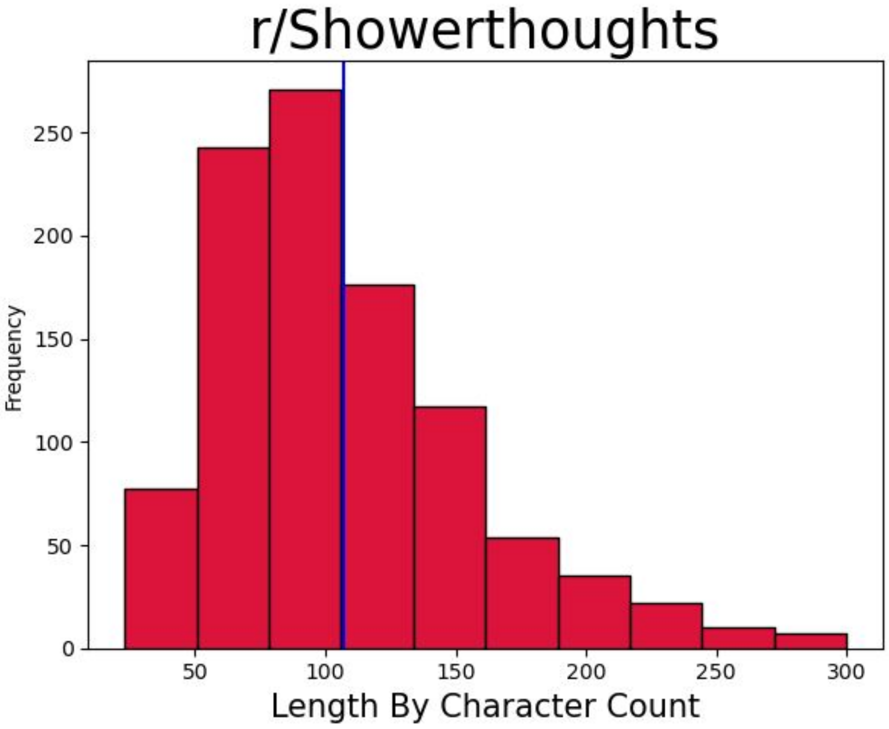
02

Data Analysis

Character Count Comparison

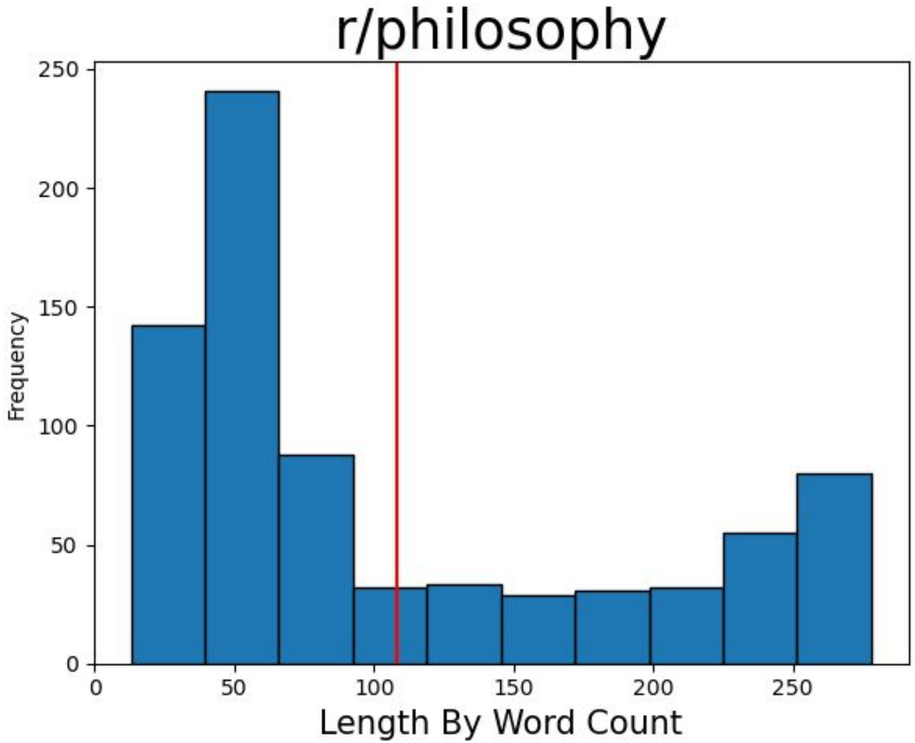


r/philosophy

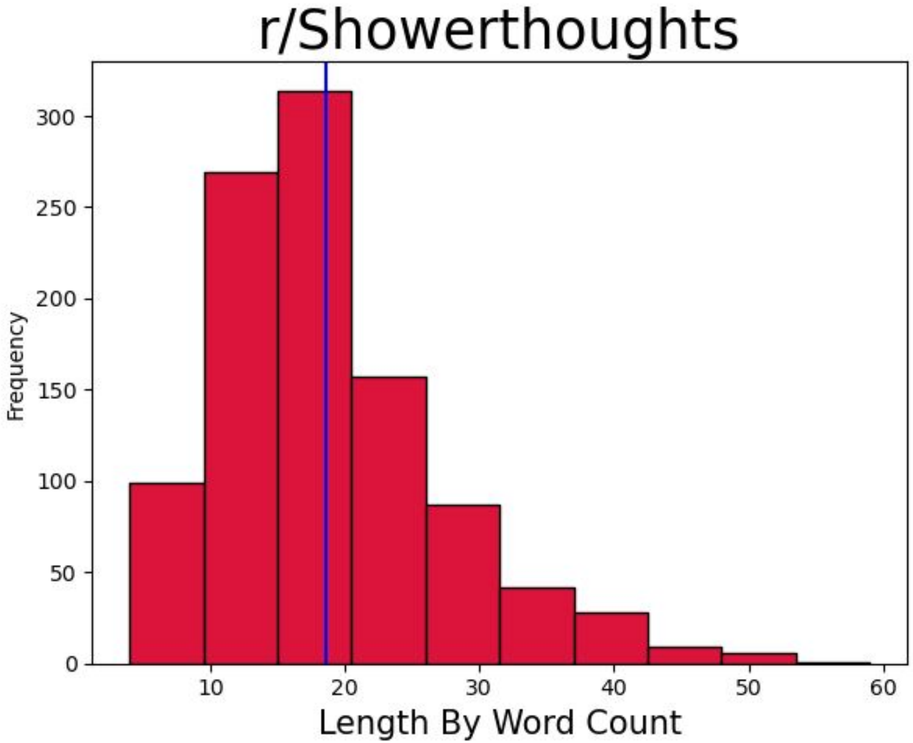


r/Showerthoughts

Word Count Comparison

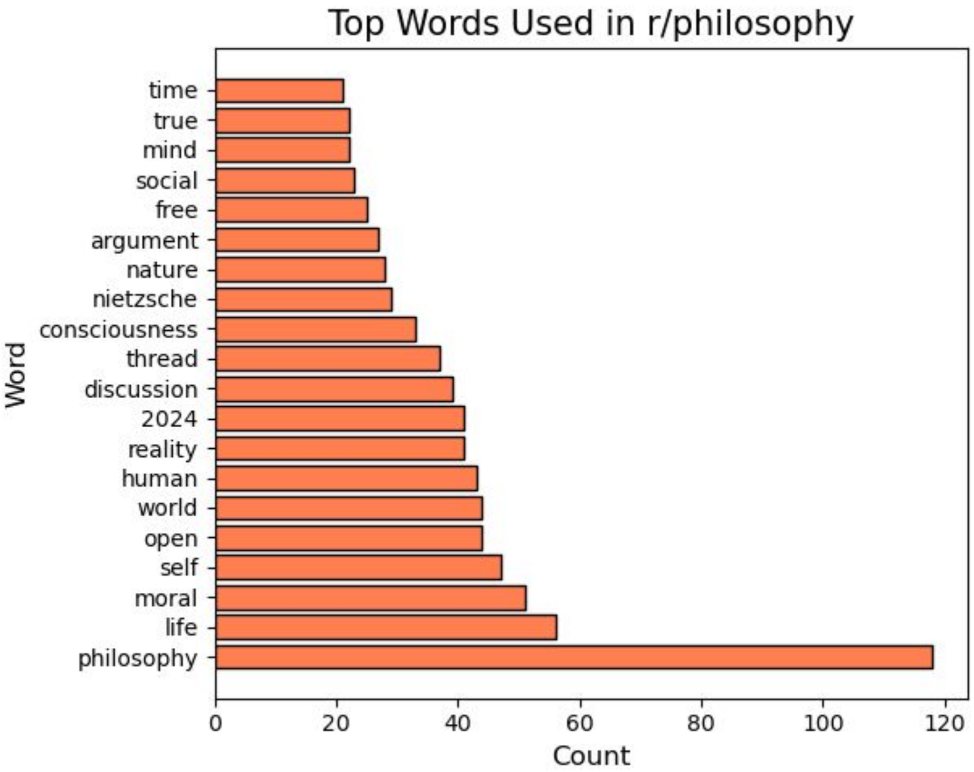


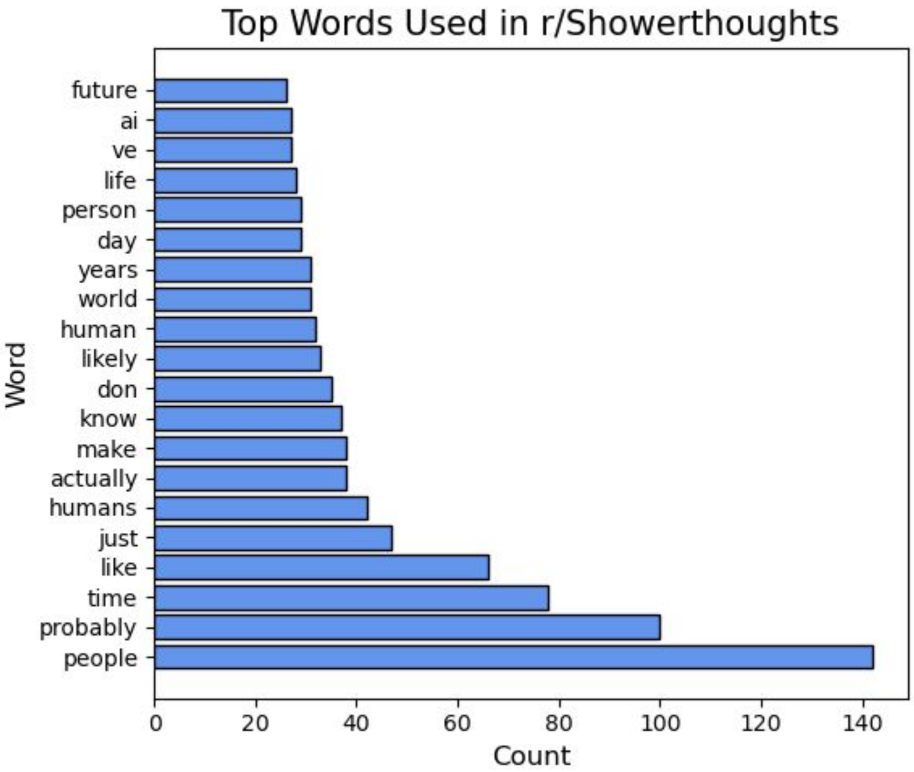
r/philosophy



r/Showerthoughts

Comparing Subreddits





03

Modelling

Methodology

Baseline Accuracy

57%

Models

- Logistic Regression
- Random Forest
- Naive Bayes

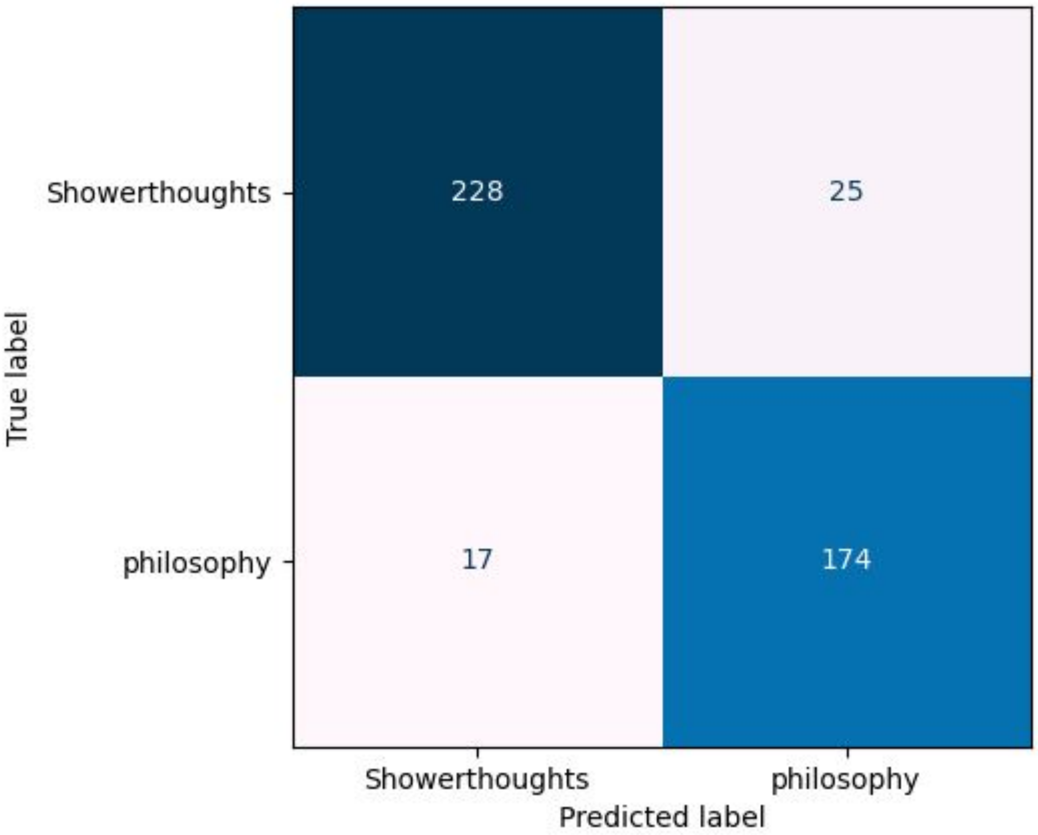
Evaluation Metrics

- Accuracy
- Bias/Variance

Trial and Error

- Tuning Parameters
- Additional EDA

Logistic Regression



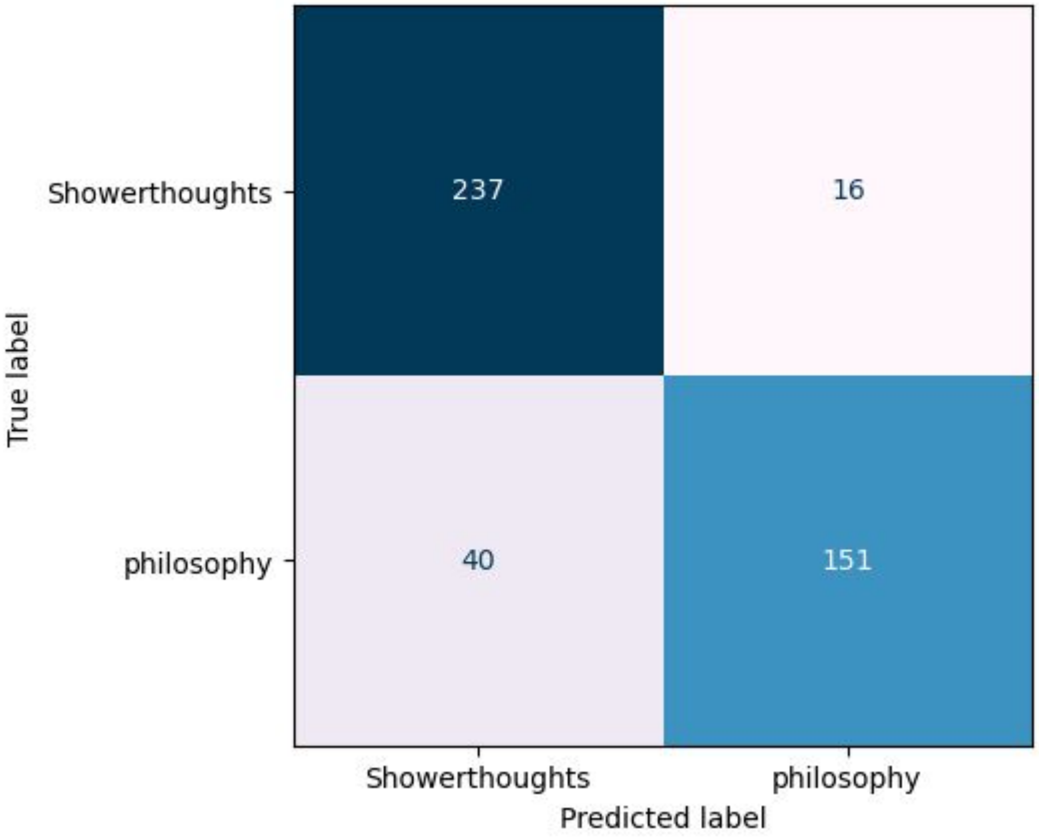
Training Accuracy

99.8%

Testing Accuracy

90.5%

Random Forest



Training Accuracy
99.8%

Testing Accuracy
87.3%

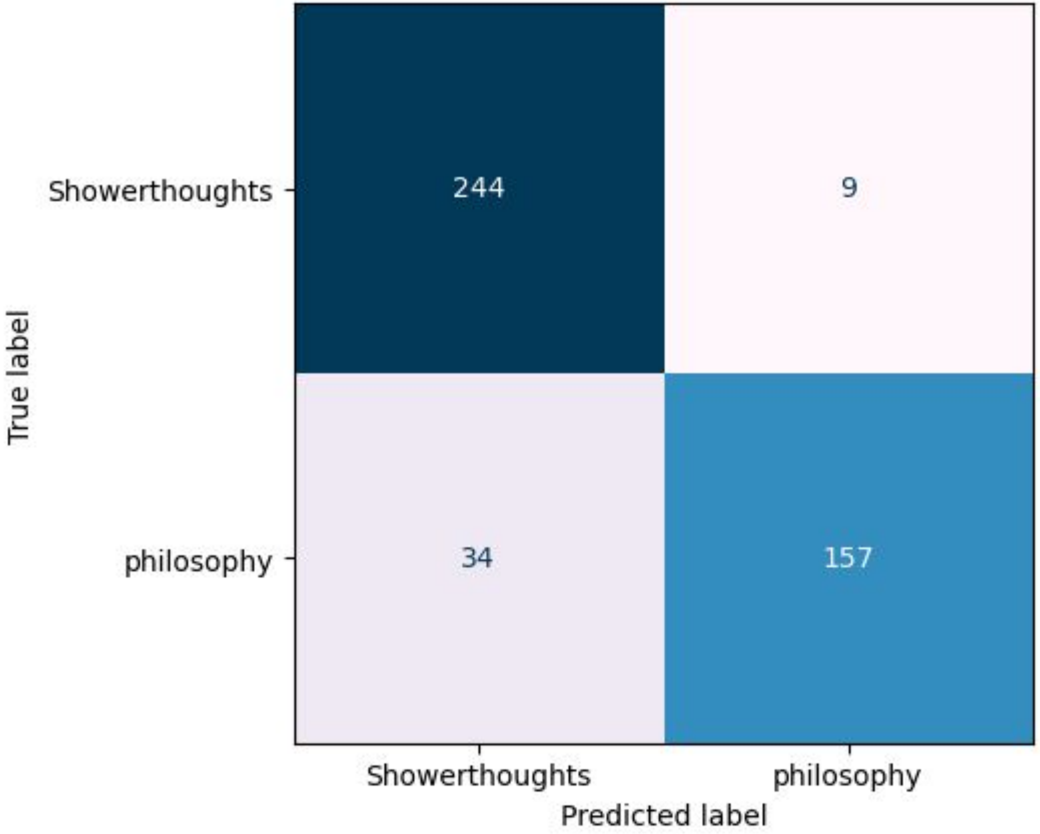
Naive Bayes

Training Accuracy

96.3%

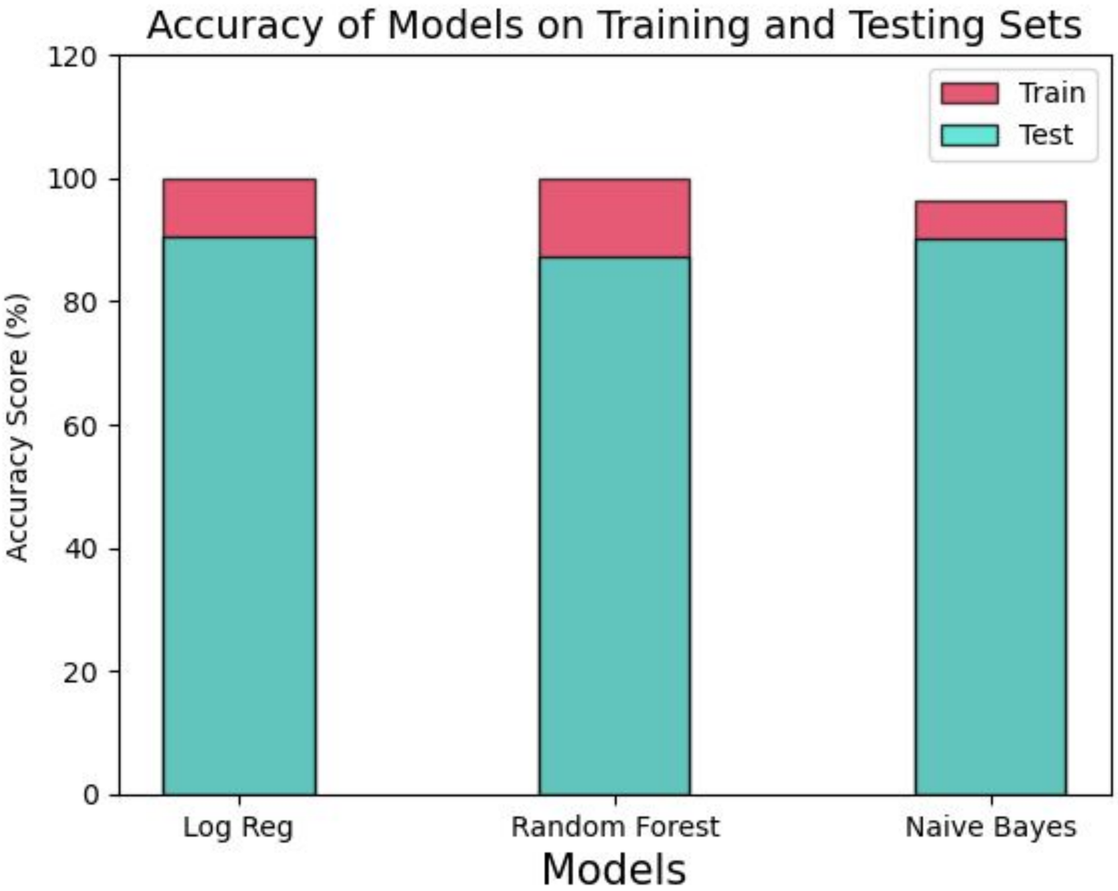
Testing Accuracy

90.3%



	Showerthoughts	philosophy
Showerthoughts	244	9
philosophy	34	157

Comparison


Accuracy of Models on Training and Testing Sets
Train
Test
120
100
80
60
40
20
0
Accuracy Score (%)
Log Reg
Random Forest
Naive Bayes
Models

Conclusion

01 Data Collection and Model Results

02 Revisiting the Problem Statement

03 Next Steps

04 Thank You!