Academia and Sustainability – Are We Talkin' 'Bout It?

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Agenda:

01 Background

02 Methods

03 Model

04 Conclusions

Background

- Who I am
- Why I'm here
  - Using Natural Language Processing techniques, can I determine if conversations within communities of Academia are encompassing language associated with sustainability?
- What you'll get from this

Methods

Collecting Data

Pushshift's API

EDA

Count Vectorizing

Word Frequency

Feature Engineering

Modelling

Logistic Regression

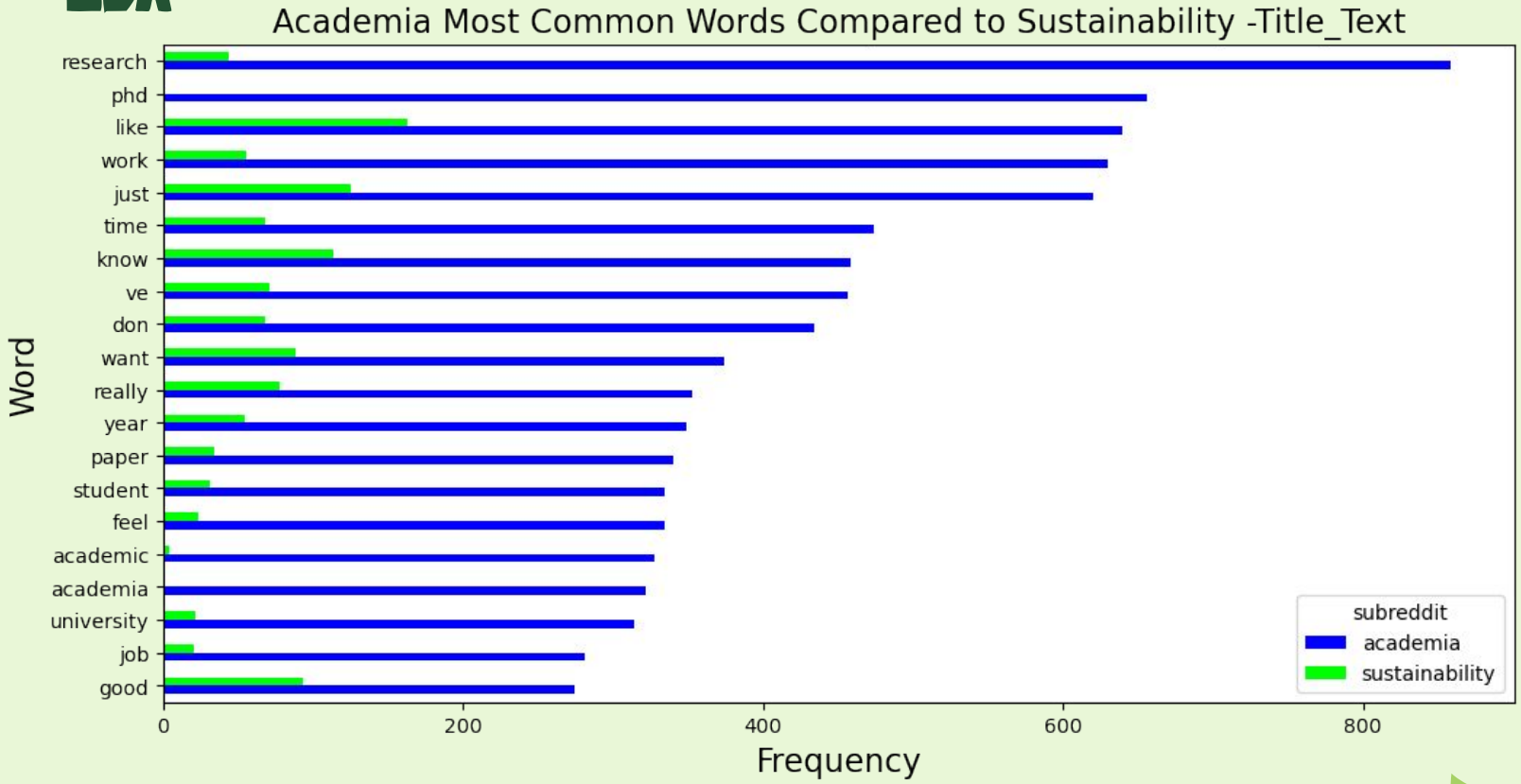
Count Vectorizing

Random Forests

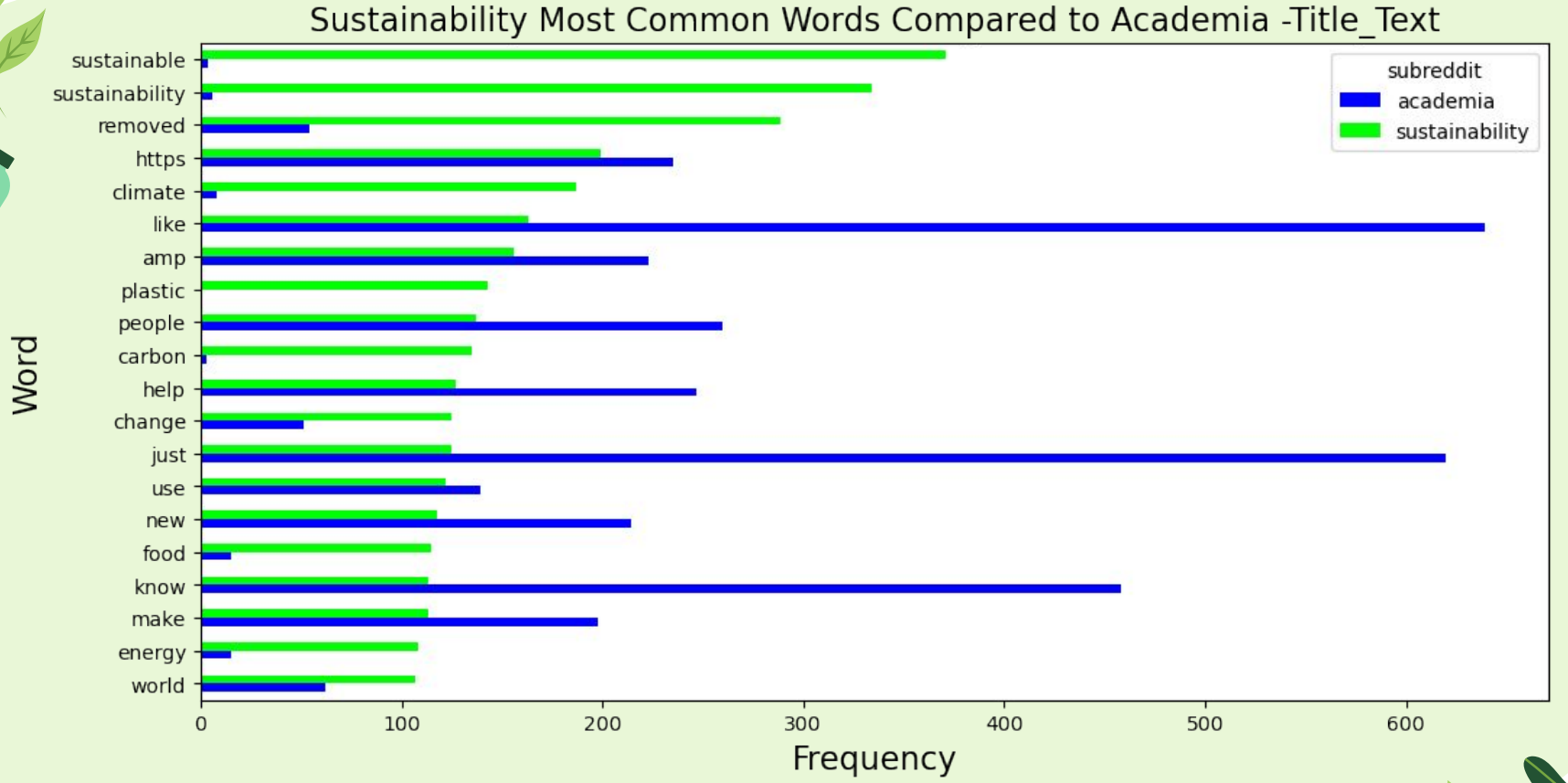
Stemming and Lemmatizing

Metrics: Accuracy and Misclassification

EDA


Academia Most Common Words Compared to Sustainability -Title_Text
research
phd
like
work
just
time
know
ve
don
want
really
year
paper
student
feel
academic
academia
university
job
good
Word
0
200
400
600
800
Frequency
subreddit
academia
sustainability

EDA


Sustainability Most Common Words Compared to Academia -Title_Text
subreddit
academia
sustainability
sustainable
sustainability
removed
https
climate
like
amp
plastic
people
carbon
help
change
just
use
new
food
know
make
energy
world
Word
0
100
200
300
400
500
600
Frequency

Highest Performing Model

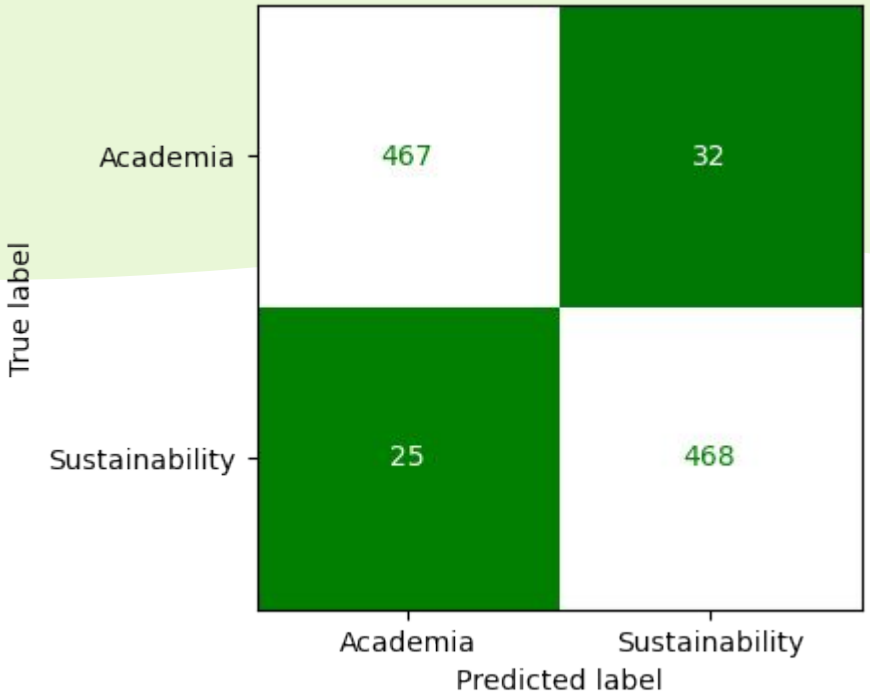
Baseline

50.34% Academia

49. 66% Sustainability

Model's Accuracy

94.4% Accurate



Words the Model Learned Well

sustainable	58.510156
sustainability	54.289252
plastic	37.328896
change	30.331387
green	28.471360
climate	28.054080
energy	27.142198
water	26.038183
environmental	24.579373
waste	22.732393

These words had to most impact on the model predicting the posts were from Sustainability

masses	-26.376153
hit	-27.193808
dissertation	-27.478596
science	-29.026406
journal	-29.880476
journals	-33.735196
phd	-38.407119
articles	-42.850538
academia	-43.777205
academic	-48.162945

These words had to most impact on the model predicting the posts were from Academia

Conclusions

YES! THE CONVERSATIONS ARE HAPPENING!

What are good methods of observation to avoid self-reporting bias in interviews? My project has to do with sustainable fashion consumption. I have come across this problem that respondents say they care for the environment or say they are shopping/using/discarding clothes in an ecofriendly way but they don't. \nWhat could be an experimental/observational design to measure real behavior? Fake shopping experiment? Observing people when they shop? \n\nI am grateful for any input :)

Predicted: Sustainability

Actual: Academia

Next Steps:

More data!

Surveys!

Save the planet!

THANK YOU!

"The greatest threat to our planet is the belief that someone else will save it."

–Robert Swan

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