



NLP for Ethical Predictions

- Can we use NLP to examine morality ?

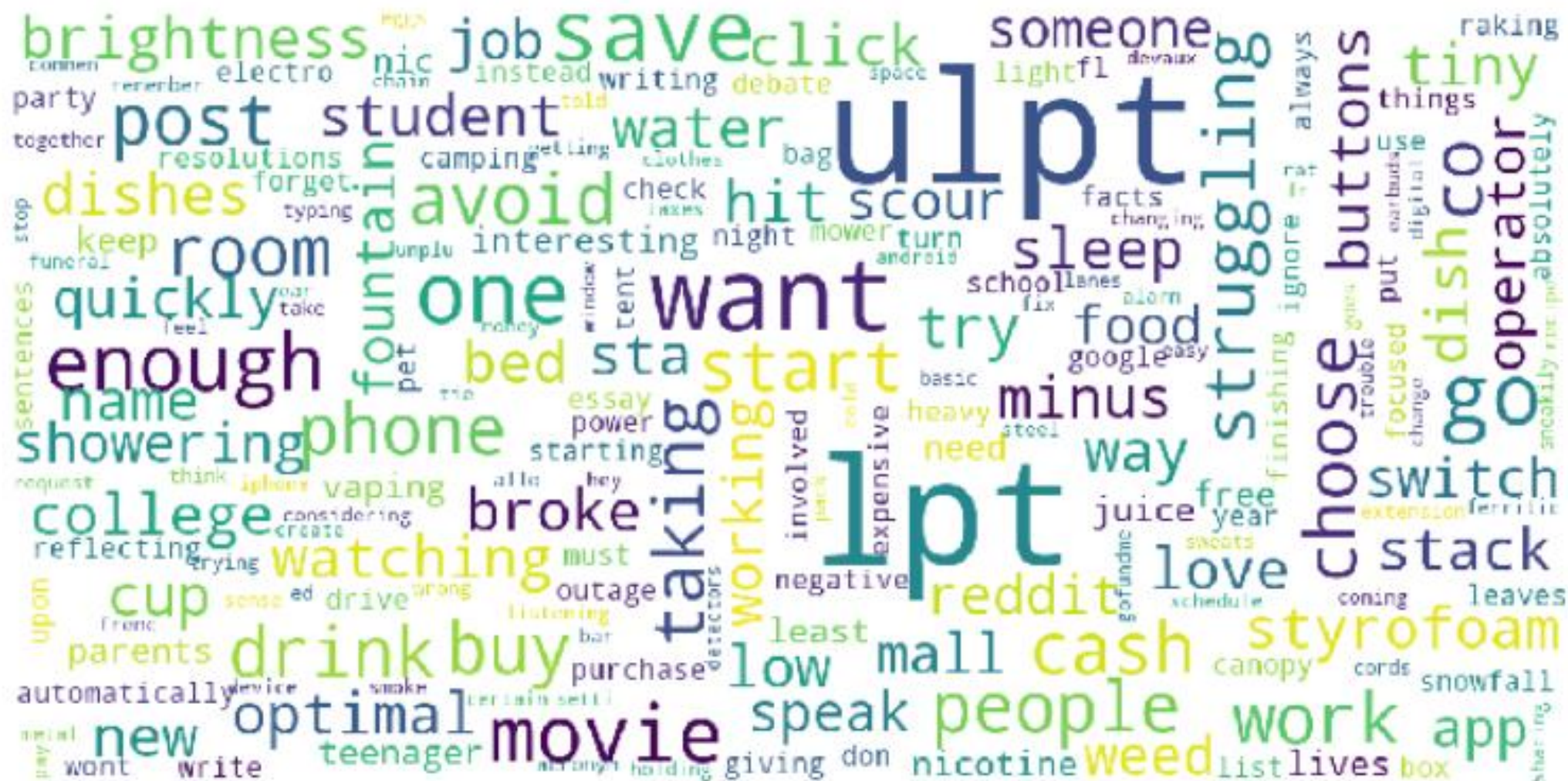
DATA SCIENTIST – TRI NGUYEN

What is morality ?

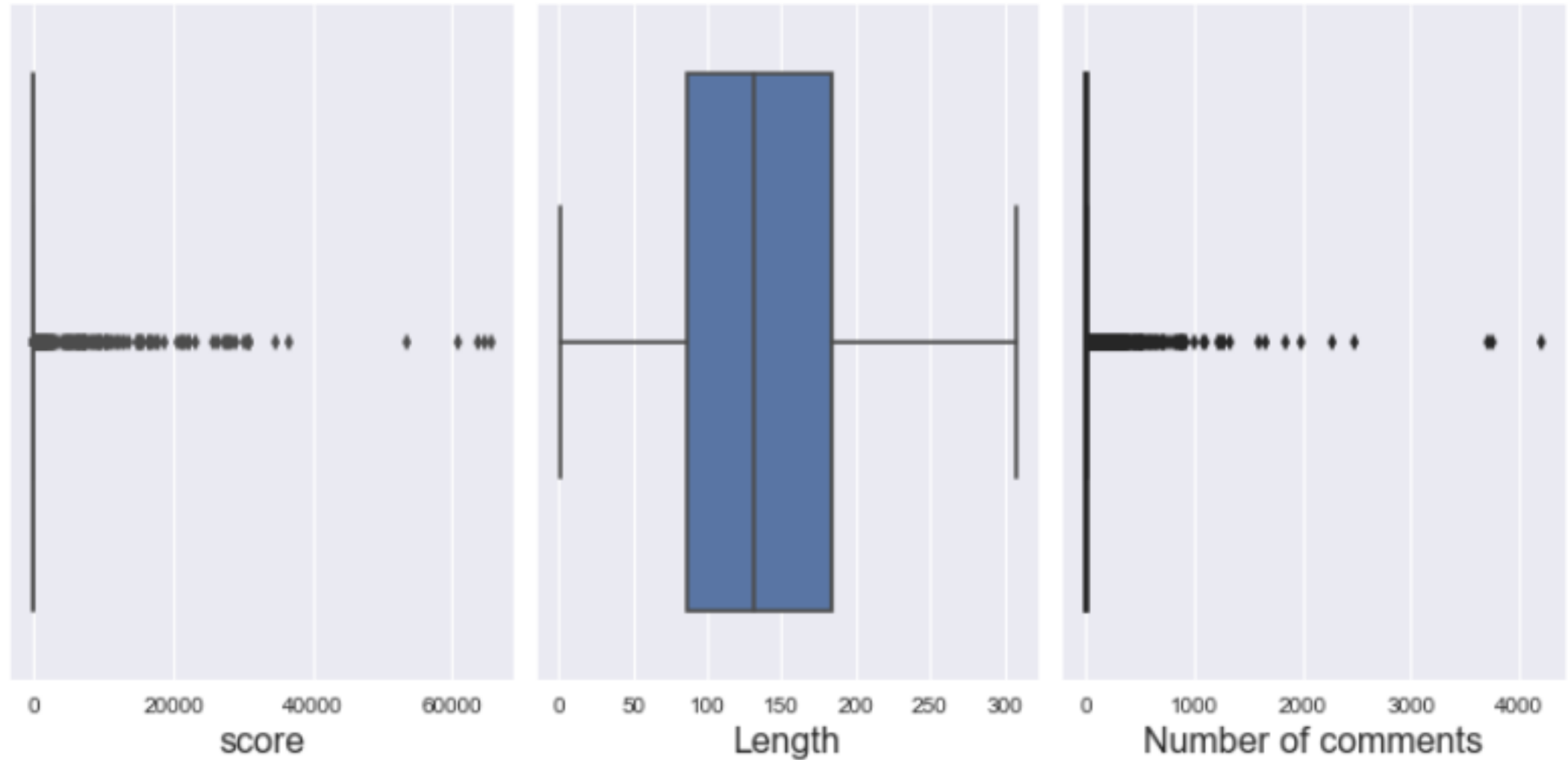
What is ethics?

- ▶ The age old question meets new age approach
 - ▶ The Process
 - ▶ Scrape the web for sites
 - ▶ Preprocess and examination of data set
 - ▶ Modeling for best fit and score
 - ▶ The Dataset
 - ▶ 2 Reddit Subreddits
 - ▶ LifeProTips
 - ▶ UnethicalLifeProtips
 - ▶ The Expectation
 - ▶ Using NLP and modeling from the data set we can predict whether a given advice

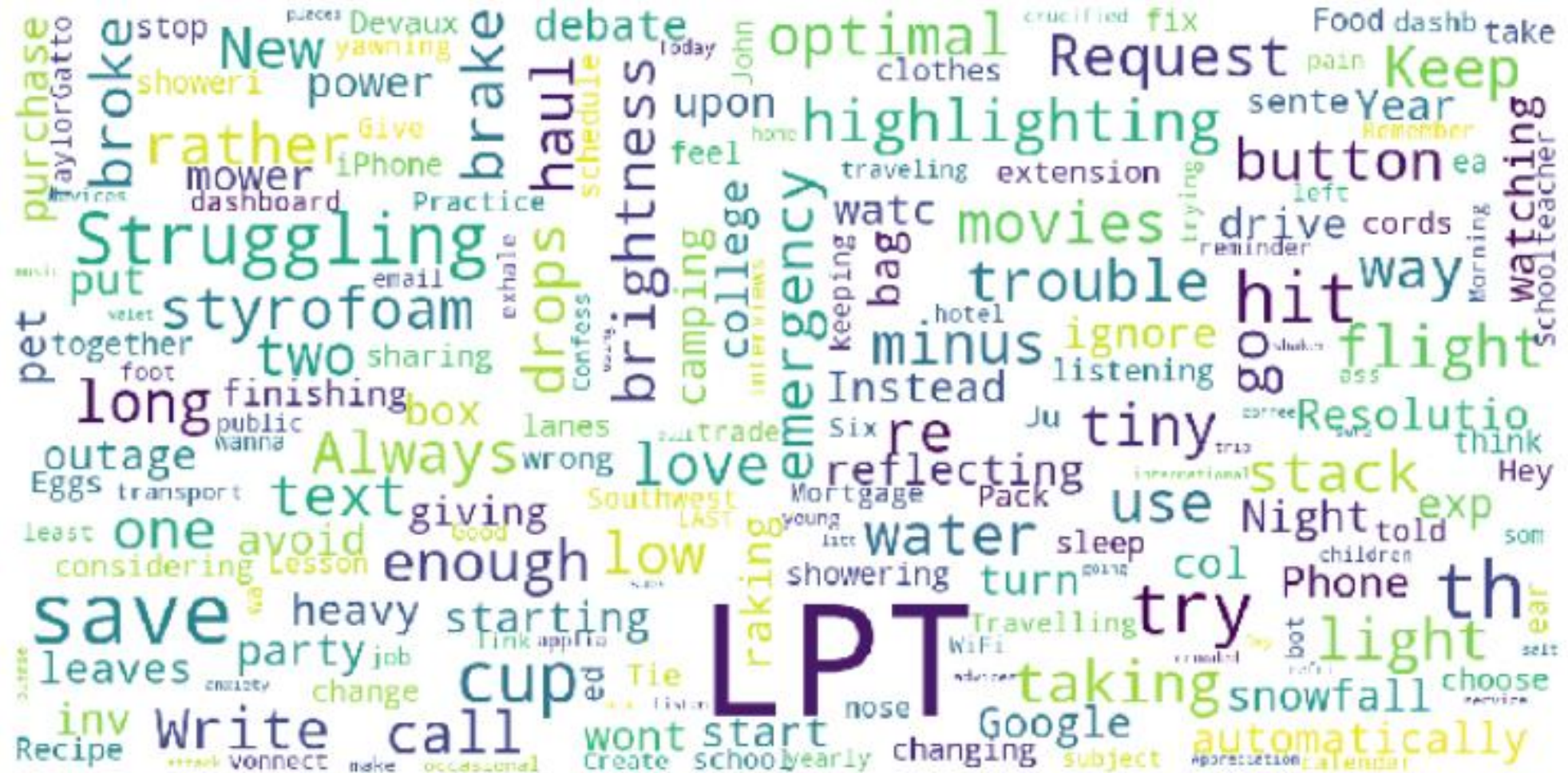
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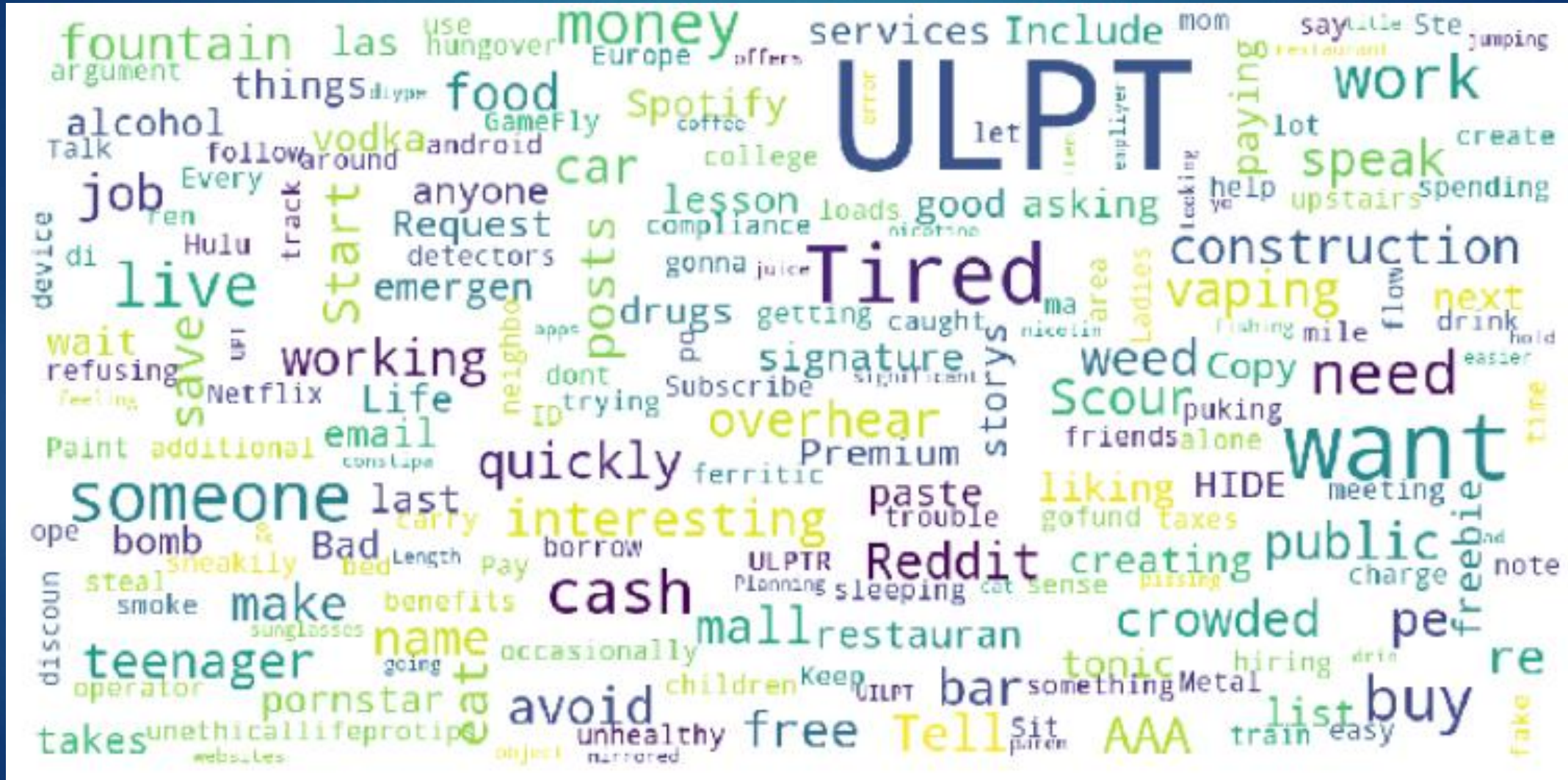
The Data Overall



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Top Words

- ▶ When Cleaning the data
 - ▶ No Stemming or Lemming
 - ▶ Ensure accurate depiction or real vernacular
 - ▶ CountVectorizer and TfidfVectorizer Comparison
 - ▶ Different mean values of words
 - ▶ Different order

CountVectorizer

| | |
|--------|----------|
| ulpt | 0.381154 |
| lpt | 0.371690 |
| want | 0.157254 |
| use | 0.082754 |
| make | 0.079734 |
| free | 0.077419 |
| like | 0.069566 |
| people | 0.067754 |
| time | 0.067553 |
| need | 0.064633 |
| buy | 0.054163 |
| way | 0.050539 |
| phone | 0.049431 |
| car | 0.048726 |
| tell | 0.046310 |
| work | 0.043391 |
| money | 0.043089 |
| say | 0.042988 |
| new | 0.042485 |
| ask | 0.042485 |

TfidfVectorizer

| | |
|---------|----------|
| lpt | 0.042153 |
| ulpt | 0.040745 |
| want | 0.022936 |
| free | 0.015248 |
| use | 0.014358 |
| make | 0.013696 |
| people | 0.012368 |
| need | 0.012228 |
| time | 0.012104 |
| like | 0.012099 |
| request | 0.011446 |
| buy | 0.010097 |
| phone | 0.009917 |
| car | 0.009875 |
| way | 0.009850 |
| work | 0.009124 |
| tell | 0.008889 |
| money | 0.008830 |
| food | 0.008788 |
| say | 0.008516 |



Lets Look at the Code!

LOGISTIC REGRESSION AND RANDOMFORREST

Conclusion

- ▶ There is predictive power in NLP in determine ethical advice
 - ▶ Only limited to specific subreddit
 - ▶ Removal of ULPT and LPT reduces the score but it still better than baseline
- ▶ Limitations in current modeling and predictive power.
 - ▶ There will come a day...one day

Top Post, you determine it!

- ▶ Pay Attention to the smell of your home when you come back from a trip - that's what it smells like to guests all the time, you just get used to it.
- ▶ Don't let people guilt you for not visiting them. They're not visiting you either.
- ▶ Save business cards of people you don't like. If you ever hit a parked car accidentally, just write "sorry" on the back and leave it on the windshield.
- ▶ If you ever get caught sleeping at your desk at work then say "They told me at the Blood Bank that this would happen" when asked for a reason