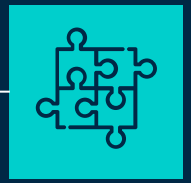
SUB-REDDIT CLASSIFICATION

Legal & Relationship Advice

Presented By: Peggy Man

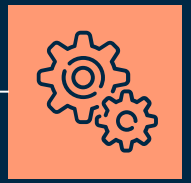
TABLE OF CONTENTS



01

PROBLEM STATEMENT

Talks about the problem and challenges



02

THE PROCESS

Talks about Data Cleaning, EDA process and Modelling

03

CONCLUSION & RECOMMENDATION

Talks about the analysis and conclude the findings

PROBLEM STATEMENT

01

PROBLEM STATEMENT

Will a legal advice be misclassified as relationship advice?

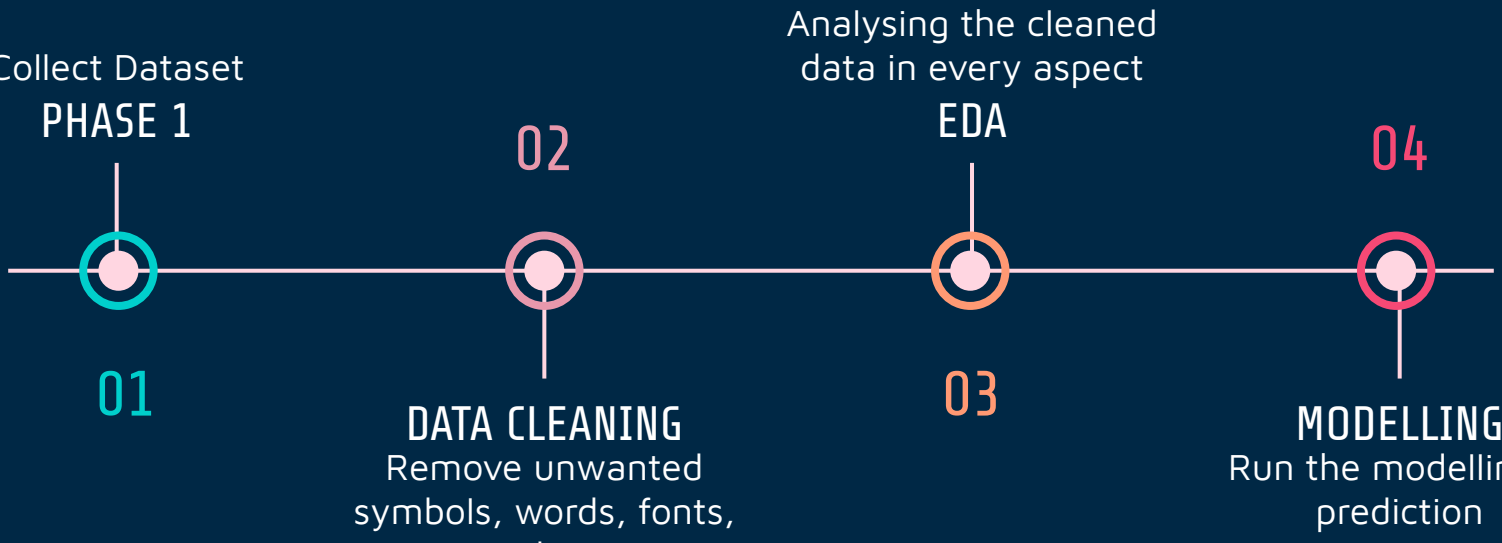
Will a posts be misclassified as relationship issue where it should be label as a legal issue?

DATA ANALYSIS

THE PROCESS

02

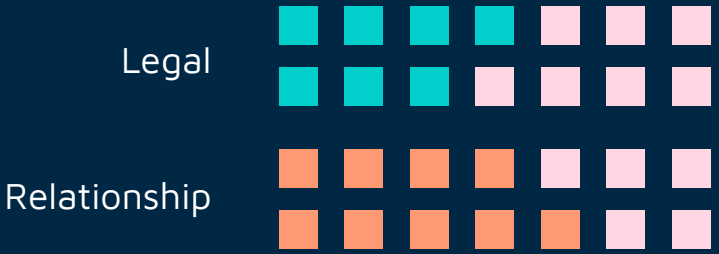
THE PROCESS


Collect Dataset
PHASE 1
01
02
DATA CLEANING
Remove unwanted symbols, words, fonts, and etc
Analysing the cleaned data in every aspect
EDA
03
04
MODELLING
Run the modelling & prediction

DATASET

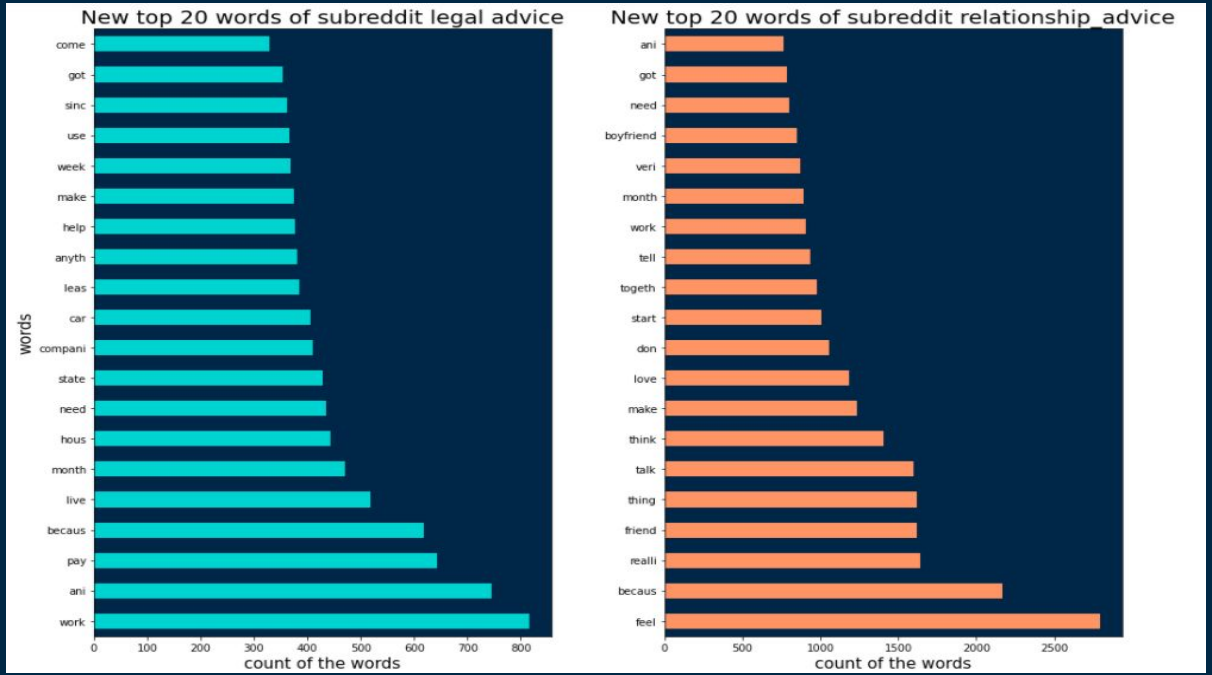
REDDIT

POSTS



EDA IN PROGRESS (Continued.)

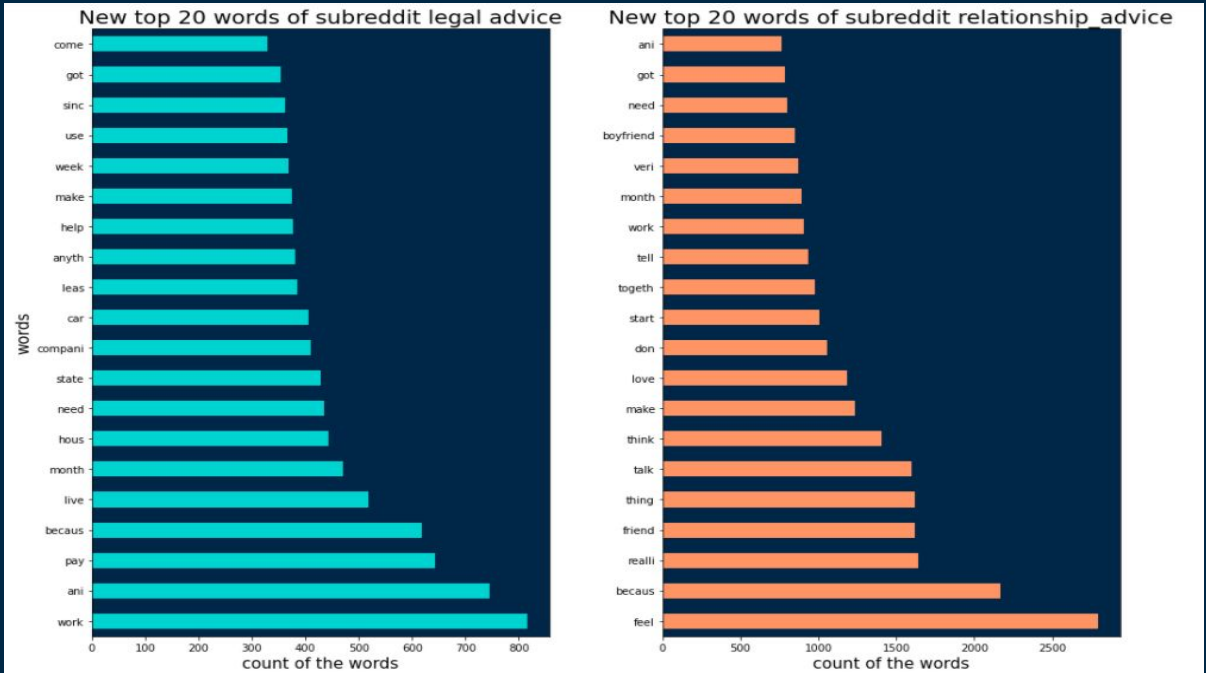
LEGAL



Relationship

EDA IN PROGRESS (Continued.)

LEGAL



Relationship

MODELLING

NAIVE BAYES

Count Vectorizer

Train: 98.5%
Test: 97.3%

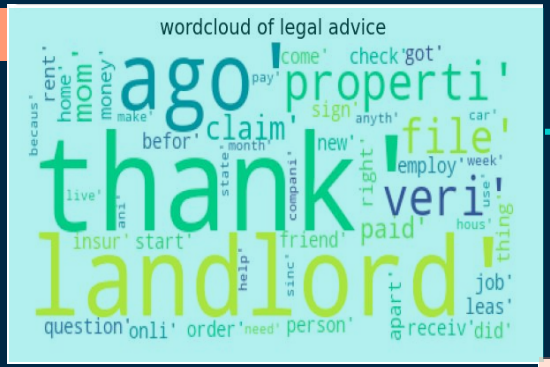
NAIVE BAYES

TFIDF Vectorizer

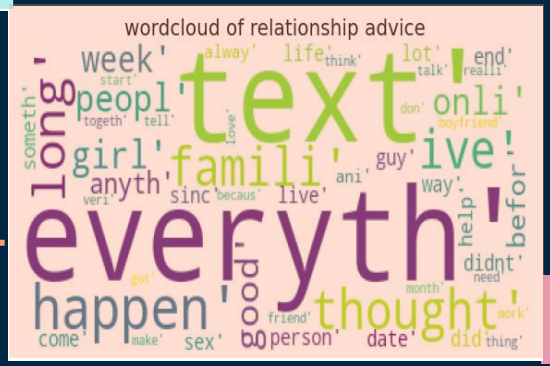
Train: 97.8%
Test: 97.1%

Baseline: 55% of majority classes

NAIVE BAYES + COUNT VECTORIZER

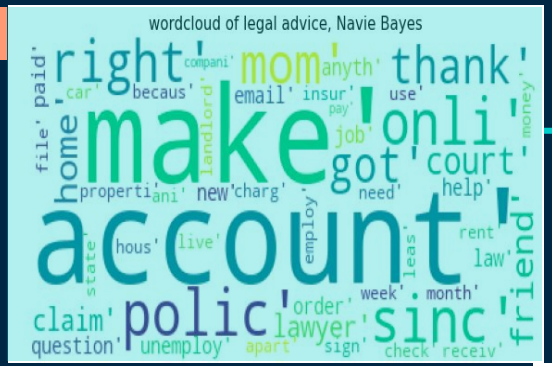


LEGAL ADVICE WORDS CLOUD

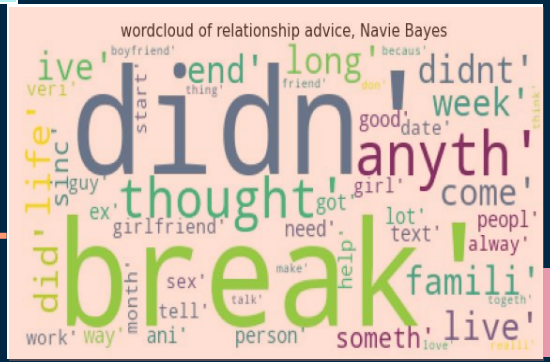


RELATIONSHIP ADVICE WORDS CLOUD

NAIVE BAYES + TFIDF VECTORIZER



LEGAL ADVICE WORDS CLOUD



RELATIONSHIP ADVICE WORDS CLOUD

MODELLING (CONTINUED)

LOGISTIC REGRESSION

Count Vectorizer

Train: 99.9%
Test: 97.3%

LOGISTIC REGRESSION

TFIDF Vectorizer

Train: 96.9%
Test: 97.4%

Baseline: 55% of majority classes

LOGISTIC REGRESSION + COUNT VECTORIZER

LEGAL ADVICE WORDS CLOUD

RELATIONSHIP ADVICE WORDS CLOUD

CONCLUSION & RECOMMENDATION

03

ACCURACY:
97%

Analysis of Misclassified Posts

Findings 1

Examine those legal advice posts that are misclassified

Findings 2

Mostly related to human relationship. did mention the following words: ex, husband, family, father, mother, stepfather, parents, sexting

Findings 3

12 misclassified posts. Where it should be legal advice posts but it has been classified as relationship advice posts.

MISCLASSIFIED POSTS

"Teenager looking for advice on helping a girl... To start off with why there's a criminal tag, her stepdad is a real, and excuse my language, but the human shitstain makes me sick whenever I think about what he's done. He has to list: raped her at least twice, beaten er, tried to touch her before, makes her feel like she can't breathe"

"**I'm begging you, Reddit**, help me find out what she could do to get out of that situation, or if any custody lawyers read this, tell me where she'll go."

"Back to the list of offenses by fuckstick of a stepdad: pulled a gun on her when he was drunk, threatened to kill her when she tried to run away, and undoubtedly more that she hasn't told me. I've advised family, but they're all in different states."

—Classified as Relationship Advice but the post is from Legal Advice

MISCLASSIFIED POSTS

"Back to the point I saw a tick tock saying it is illegal to search a student unlawfully and there was a family who sued the school."

"Domestic abuse.**I don't know if this the right subreddit** but I just want to reach as many people as possible to find a solution. I'm 21 and I live at home with my mother who frequently gets beaten by my stepfather."

"So I don't know how to tag this but my ex all the sudden out of the blue contacts me and is threatening to take my cat throw away. What do I do if she comes to my parents house searching for me or the cat despite not being welcome there?"

—Classified as Relationship Advice but the post is from Legal Advice

"Collect at least 10,000 posts and to include other features like the comments, created time, length of post, run on others classification models such as Random Forest and K-Nearest Neighbour. Try different stop words with different parameters of the models."

—IMPROVEMENT PLAN

"Educate Reddit admins and the Reddit moderators to be more aware and pay attention to cases involving family and parenting problems"

"Can be critical and sensitive, we should minimize the misclassified post. (False negative are more important than the false positive.)"

—RECOMMENDATION

Do you have any questions?

THANKS

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