

# Shower Thoughts v Intrusive Thoughts

Project 3 | DS1 523 | Adriana J Machado



# TABLE OF CONTENTS



## 1.0 Background & Narrative

Growing telehealth industry and ethics

## 2.0 Exploratory Data Analysis

NLP & Sentiment Intensity Analysis

---

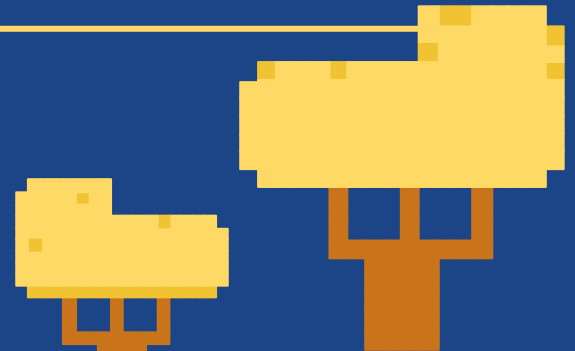
## 3.0 Modeling

Comparisons and the winner

## 4.0 Recommendations

And iterations

---





1.0

# Background & Food for Thought





# Telehealth is Booming



1964-1966

ELIZA (MIT Artificial Intelligence Laboratory by Joseph Weizenbaum)



Global mental health apps  
hit 4.2 billion USD

2021

2030

Global mental health apps  
projected to hit 17.5 billion  
USD



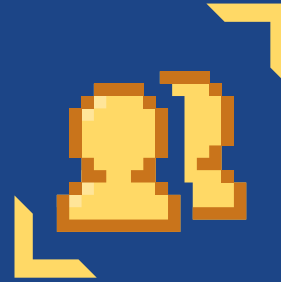


## Social Responsibility



### AI in Mental Health Services

Funded, widely-used, nonprofit mental health services are using AI to detect crises in individual help-seekers



### PRIVACY

Mozilla has a running list of mental health apps (counseling/therapy, prayer, meditation, etc.) and their data privacy ratings



## Reddit: Not Clinical Research



r/ShowerThoughts  
r/IntrusiveThoughts



Anonymity  
& Honesty



# 2.0

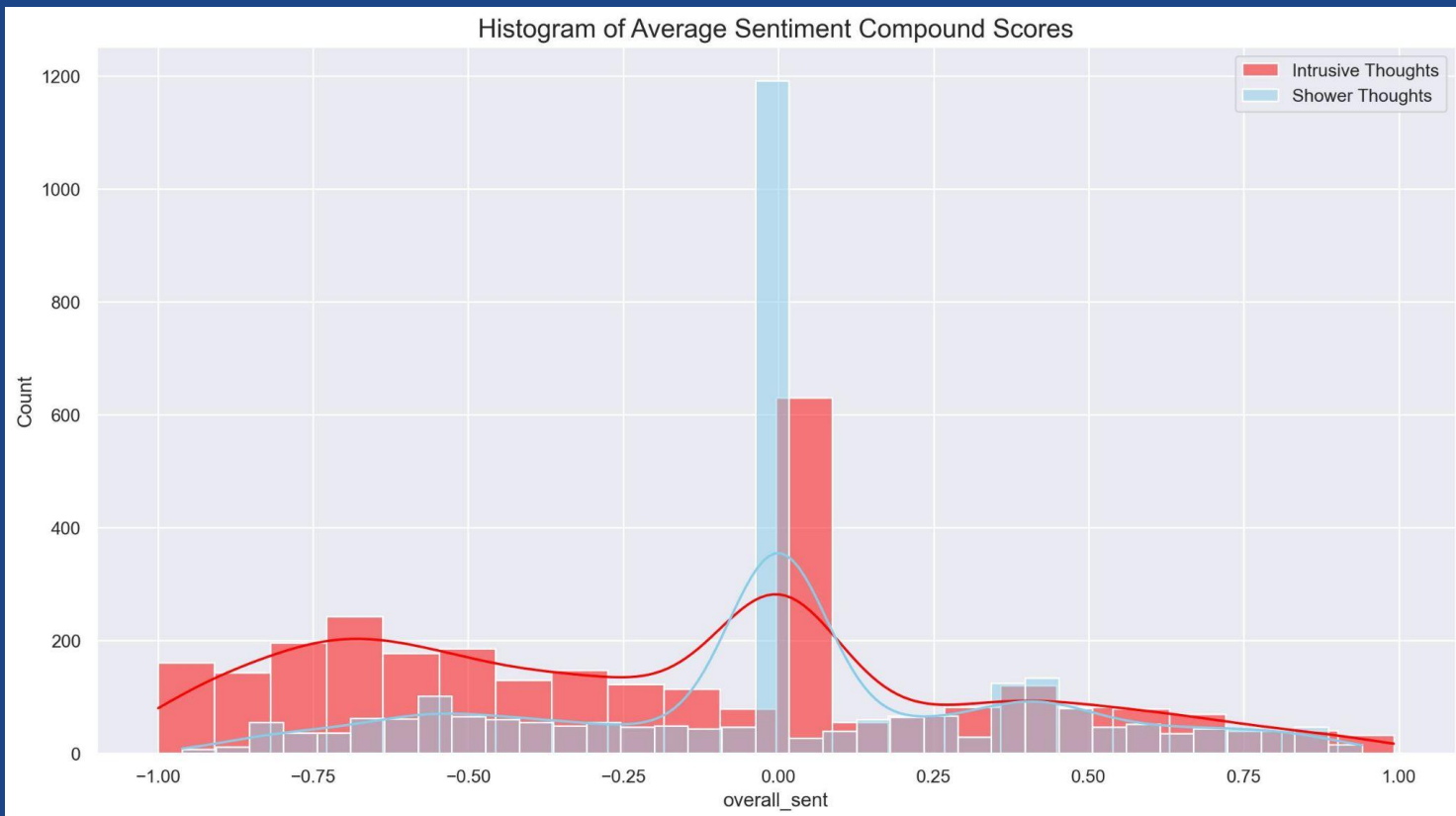


## Exploratory Data Analysis



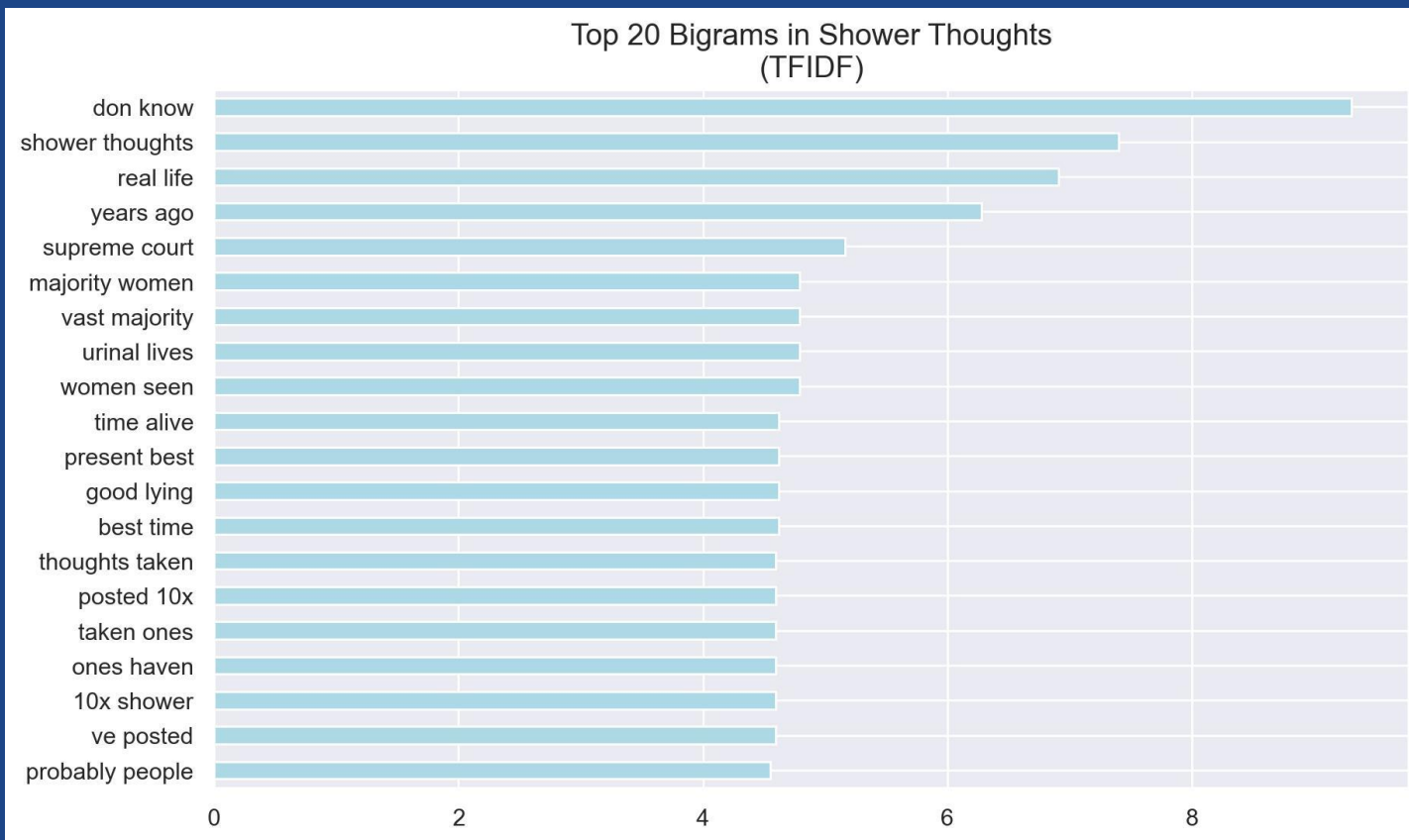


# Sentiment Intensity

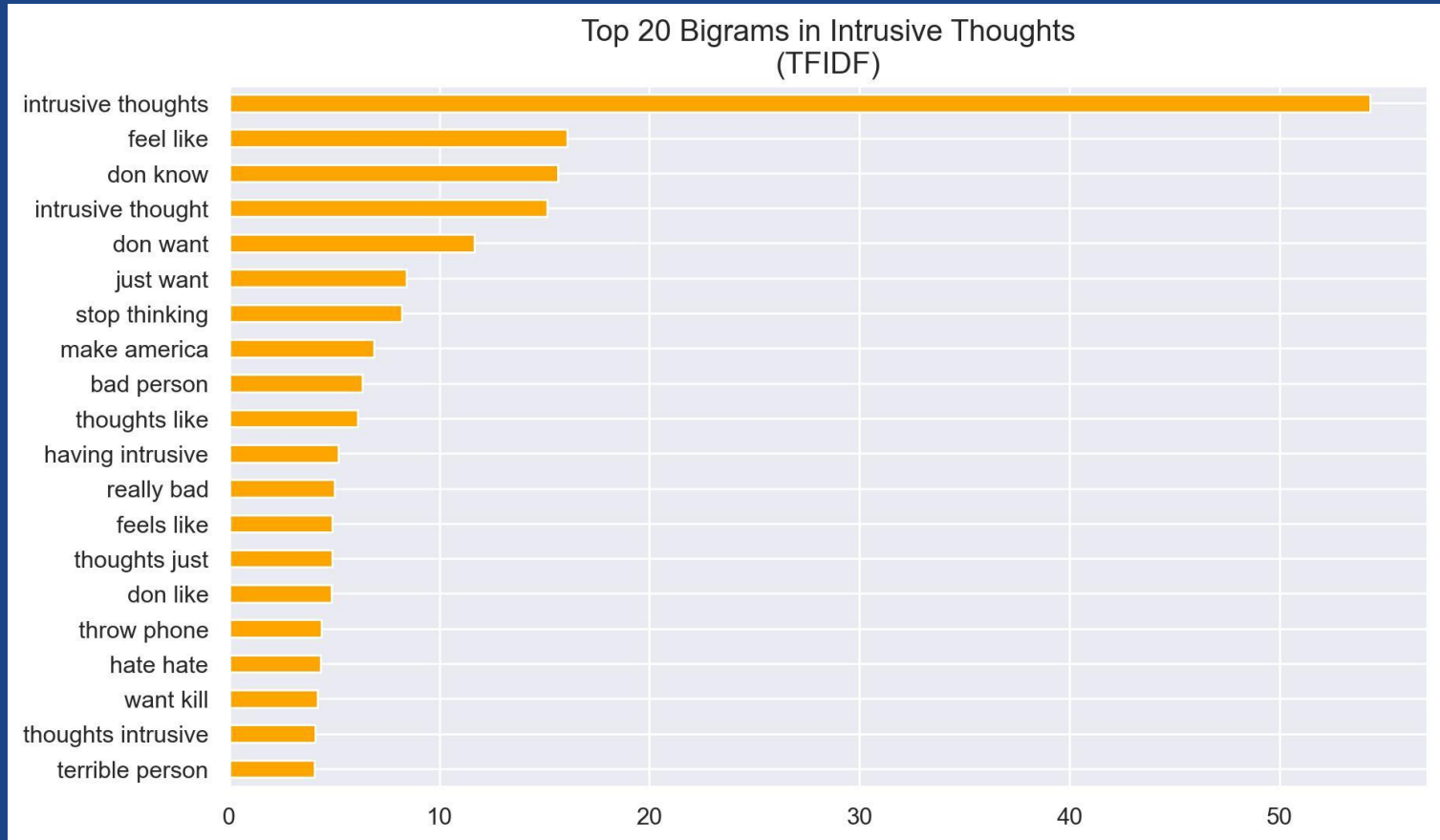




# Shower Thoughts Bigrams



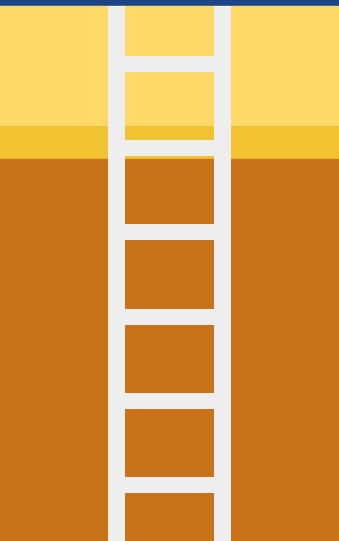
# ⬅ Intrusive Thoughts Bigrams ➡





3.0

Modeling





# 96.5%

Test Accuracy w/ CountVectorizer, Multinomial  
Naive Bayes (bigrams and kept stop words)





# High Scores



## Accuracy

Train: 98.2%

Test: 96.5%

Difference: 16%



## Precision

Test: 97%



## Recall

96%



## F1 Score

Test: 97%

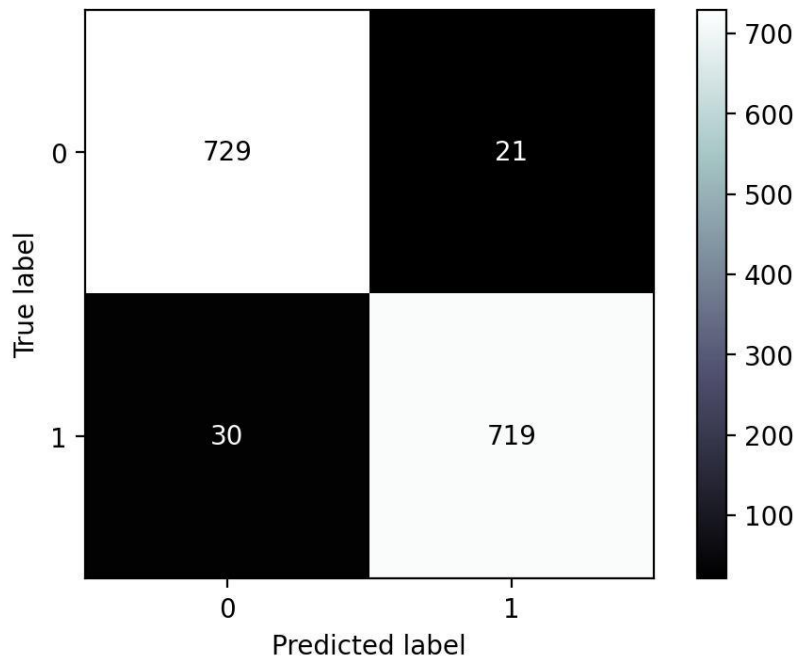




# Confusion Matrix



CountVectorizer & Multinomial Naive Bayes | ngram\_range = (2,2)  
0 = Intrusive Thoughts | 1 = Shower Thoughts





# 4.0

## Recommendations

- Iterate to stay up to date
- Conduct more controlled clinical research w/ AI
- Consider the individual consequences in policy-making



# THANKS!

Any questions?

CREDITS: This presentation template was created by Slidesgo, including icons by Flaticon, and infographics & images by Freepik.

**Please keep this slide for attribution.**