

The background features a light blue surface with several colorful, rounded square app icons. These icons include various designs: a white figure on a colorful field, a white leaf, a white circle, and a white wavy line. The icons are arranged in a scattered pattern, creating a vibrant and modern aesthetic.

JONATHAN LEE

COMPETING IN THE MENTAL WELLNESS IOS APP MARKET

Natural Language Sentiment Analysis

BACKGROUND

- COVID-19 lockdowns and restrictions have impacted anxiety and depression rates
- 93% increase in anxiety screens from Jan-Sept 2020, compared to total number in 2019
- 62% increase in depression screens
- Difficult for patients to meet with health professionals face-to-face



**MENTAL HEALTH APP MARKET TO SEE A COMPOUND ANNUAL GROWTH
RATE OF 20.5% FROM 2021 THROUGH 2027 TO REACH \$3.3B BY 2027
- MARKET WATCH**

4 MILLION

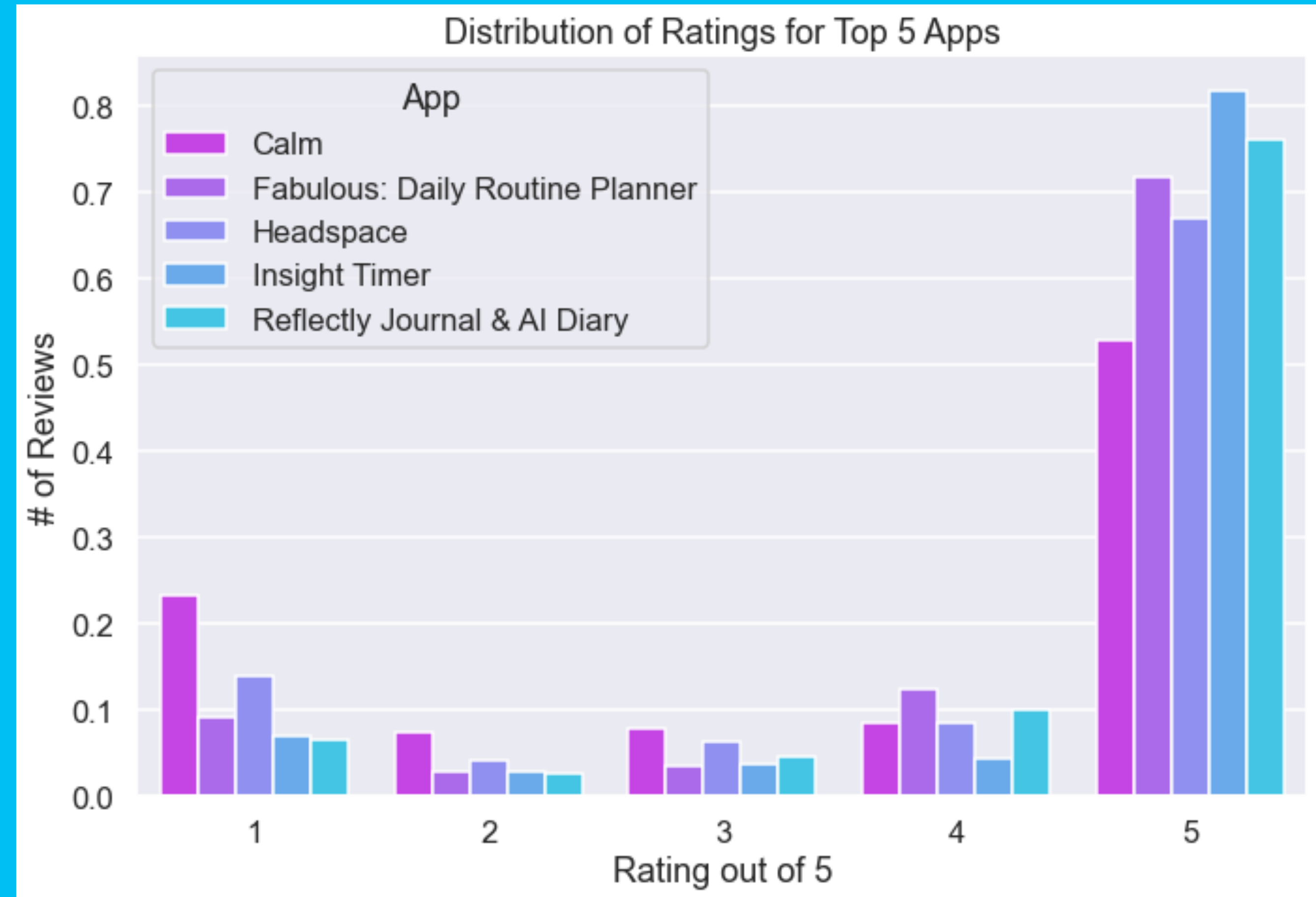
FIRST-TIME DOWNLOADS OF TOP 20 MENTAL WELLNESS APPS IN THE US IN APRIL 2020

BUSINESS PROBLEM

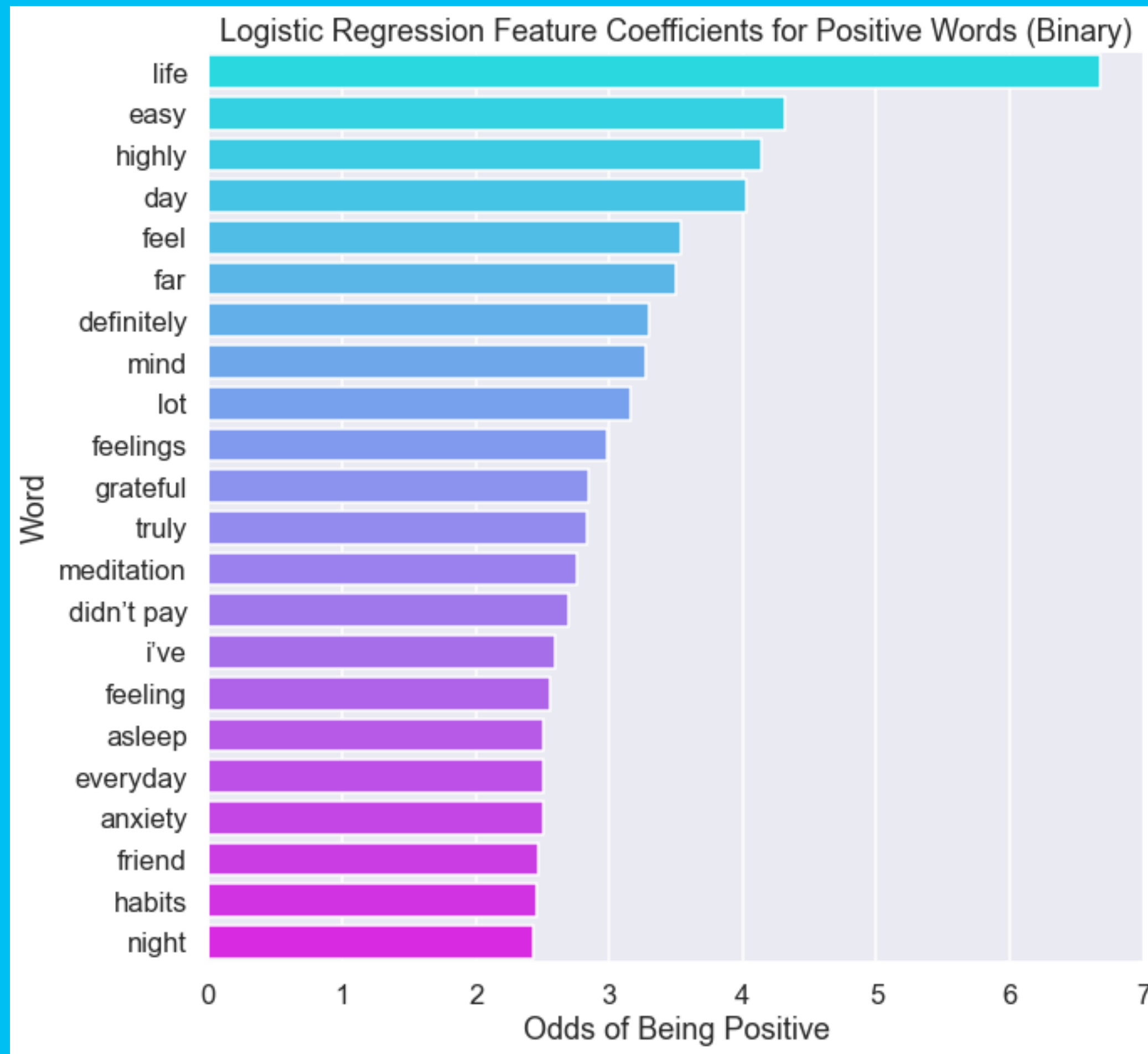
- The mental wellness app market is highly competitive with over 300K health apps available worldwide
- Determine what users enjoy or dislike most about mental wellness apps currently on the market
- Develop a strategy to build a new mental wellness app to compete with existing top performers

DATA OVERVIEW

- 44,698 total text reviews and ratings obtained from iOS US App Store
- Includes reviews written for 31 popular mental wellness apps
- Overall sentiment indicated by rating:
 - 1-3 Stars: Negative
 - 4-5 Stars: Positive
- Mean average rating across all reviews: 4.15



WHAT DID USERS LIKE?

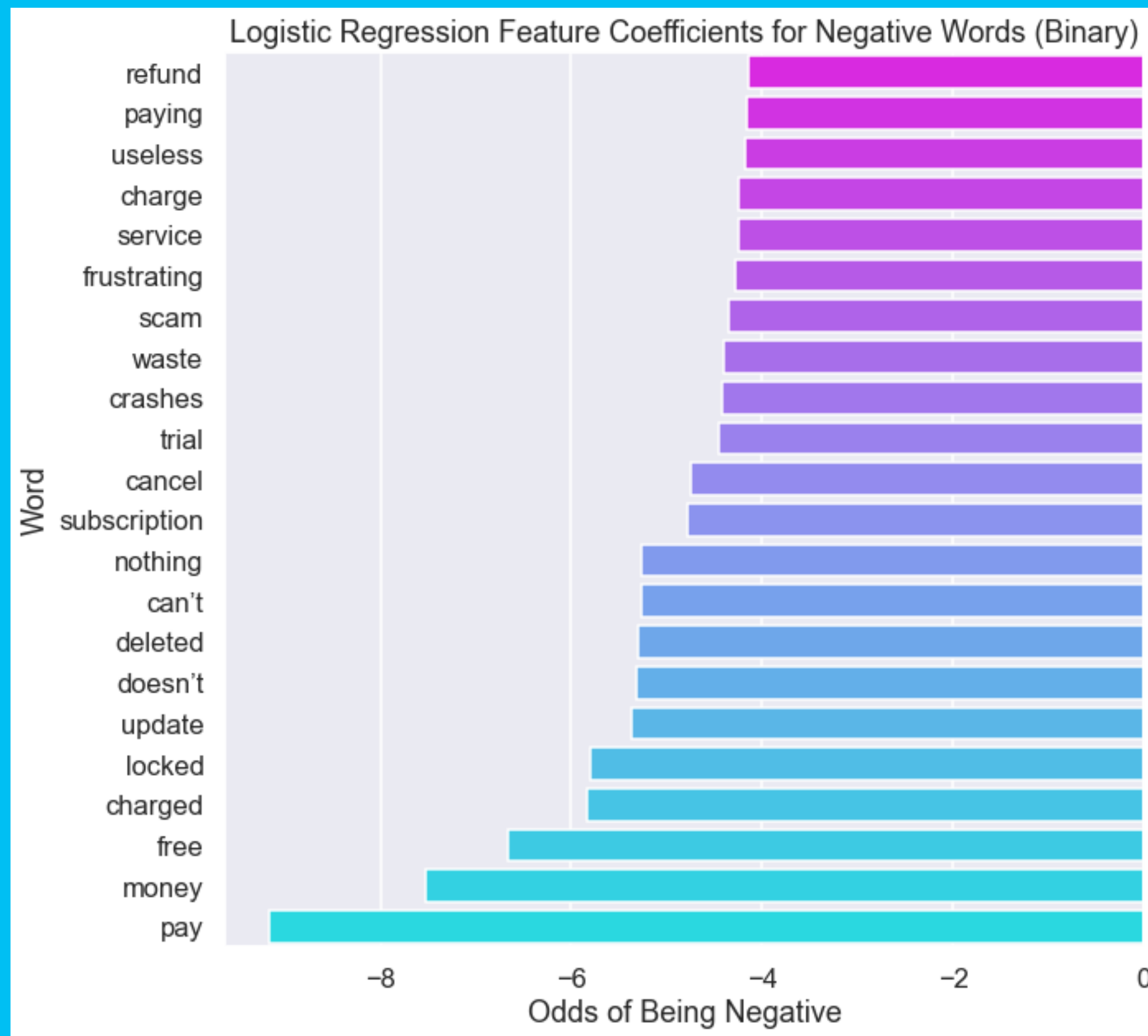


Words most likely to indicate a positive review

POSITIVE SENTIMENT

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WHAT DID USERS DISLIKE?

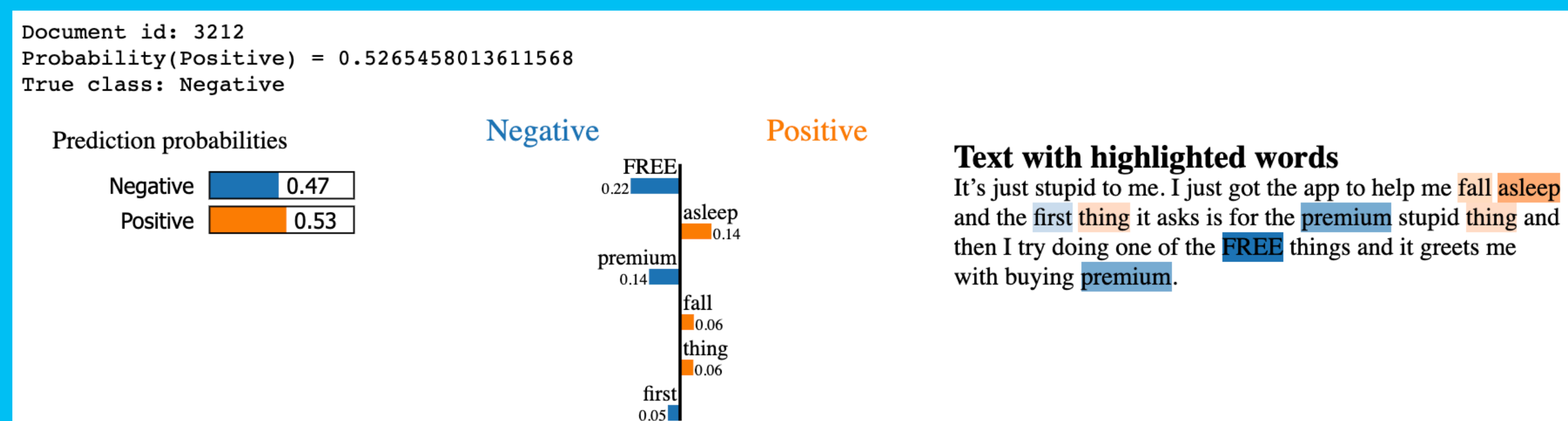
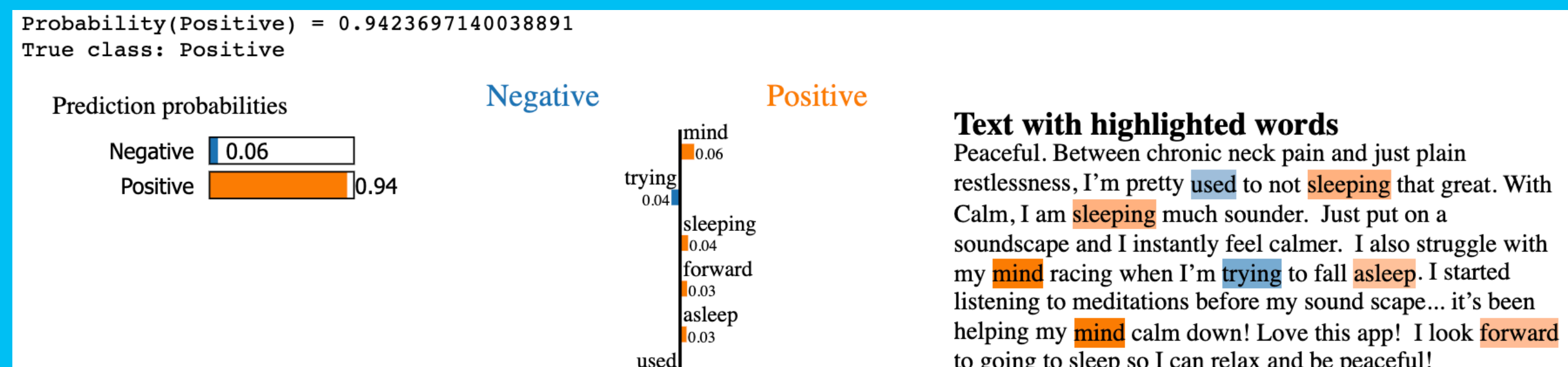
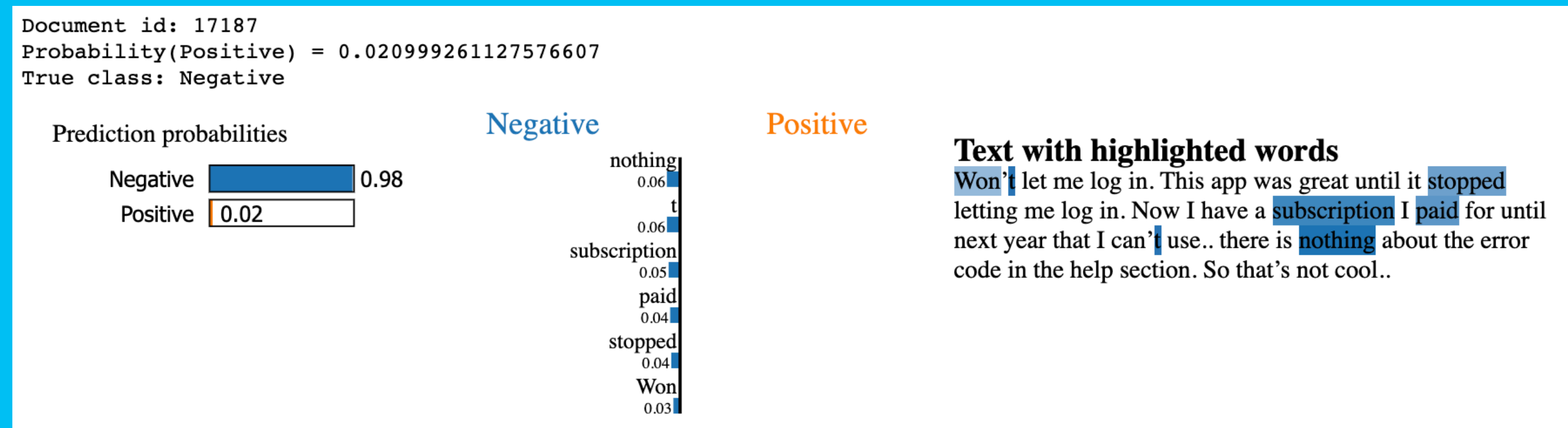


Words most likely to indicate a negative review

NEGATIVE SENTIMENT

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HOW THE MODEL WORKS



89% prediction accuracy

Correctly identified
86% of negative
reviews

Correctly identified
90% of positive reviews

LOGISTIC REGRESSION

FINDINGS

- **Topics correlated with negative sentiment:**
 - **Payment and costs**
 - **Technical and customer support**
- **Topics correlated with positive sentiment:**
 - **Ease of use**
 - **Sleep-aid functionality**

FINAL RECOMMENDATIONS

- **Thoroughly research pricing scheme and be transparent about free vs premium features**
- **Thoroughly train customer support team on how to diagnose and address any technical or payment-related complaints**
- **Invest in R&D of sleep-aid functionality**
- **Develop app interface to make it aesthetically pleasing and ease to use**

LIMITATIONS AND FURTHER ANALYSIS

- Obtain and analyze pricing data to identify optimal pricing scheme
- Include Google Play Store app reviews
- Implement Latent Dirichlet Allocation to extract further insights on what topics are considered negative vs positive

THANK YOU!