

Classifying CPAP Users

DSI 35:
Benedict





Overview

1. BACKGROUND
2. METHODOLOGY
3. KEY FINDINGS
4. RECOMMENDATIONS

Problem statement



BreathEasy is a CPAP reseller and would like to advertise to two groups.

1. People who use CPAP machines
2. People who do not use CPAP machines but are concerned about sleep

Each group will have a different advertisement presented to them.

They want to have a model to predict which advertisement to show them based on their posts on reddit or other forms of social media.

Growing industry

Global Continuous Positive Airway Pressure (CPAP) Devices Market Size/Share Worth USD 7.8 Billion by 2030, Emerging Trends, Business Strategies, Competitive Landscape and Regional Analysis



Markets N Research

February 27, 2023 · 12 min read



Markets N Research

The global continuous positive airway pressure (CPAP) devices market size was valued at USD 5.2 billion in 2022. The market is projected to grow from USD 5.2 billion in 2022 to USD 7.8 billion by 2030, exhibiting a CAGR of 5.90% during the forecast period.

 Microsoft

90 days free s

Tech Show Sale

Surface Laptop Studio, 256GB SSD,
Core i5, 16GB RAM, Microsoft

S\$ 2,239.00

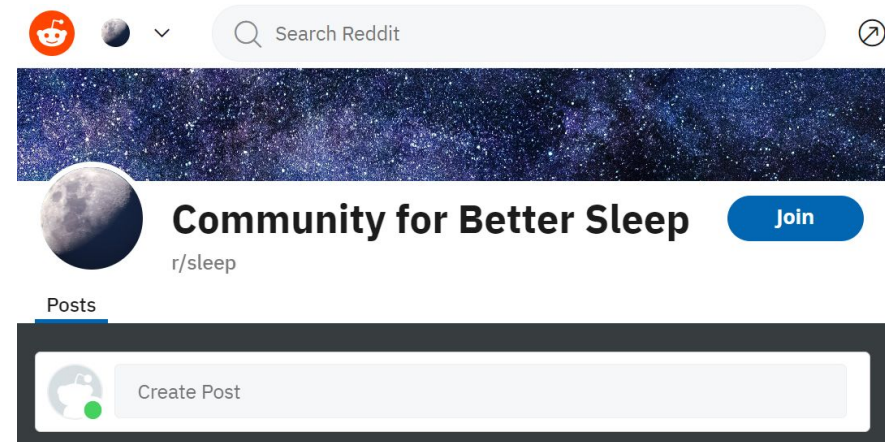
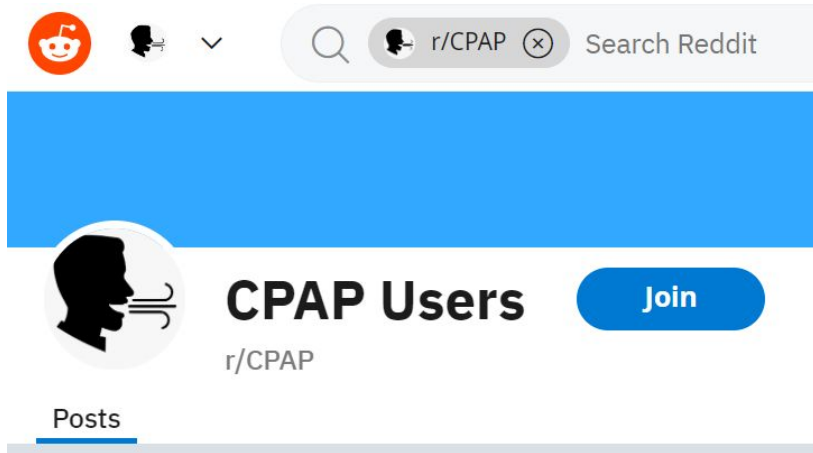
Buy Now



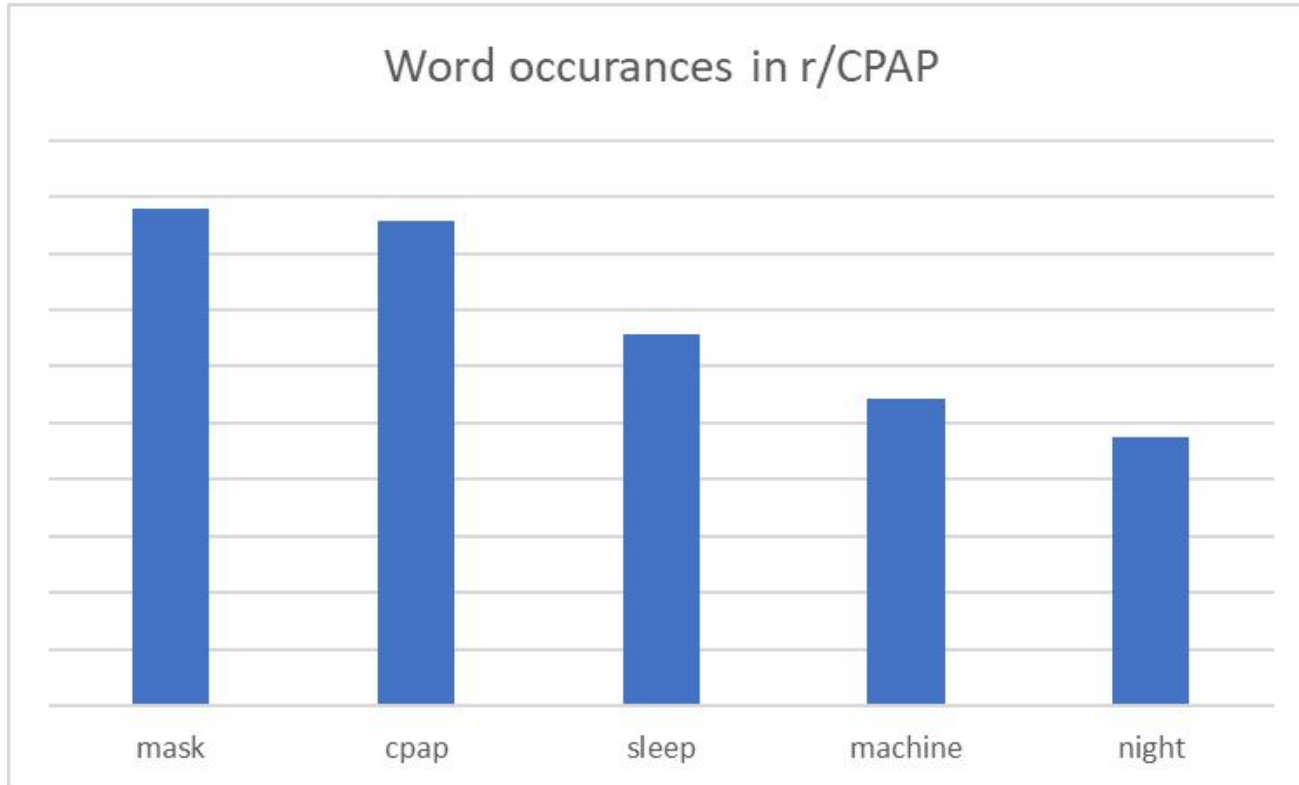
Quote Lookup

TRENDING

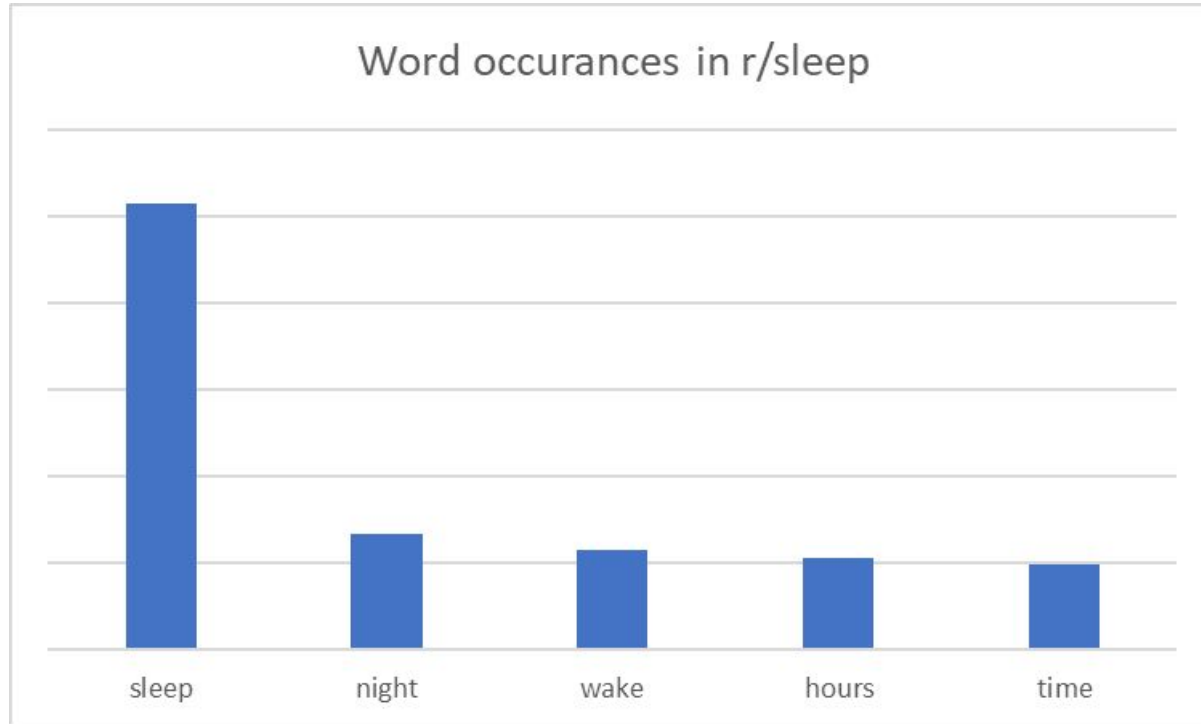
Data Collection



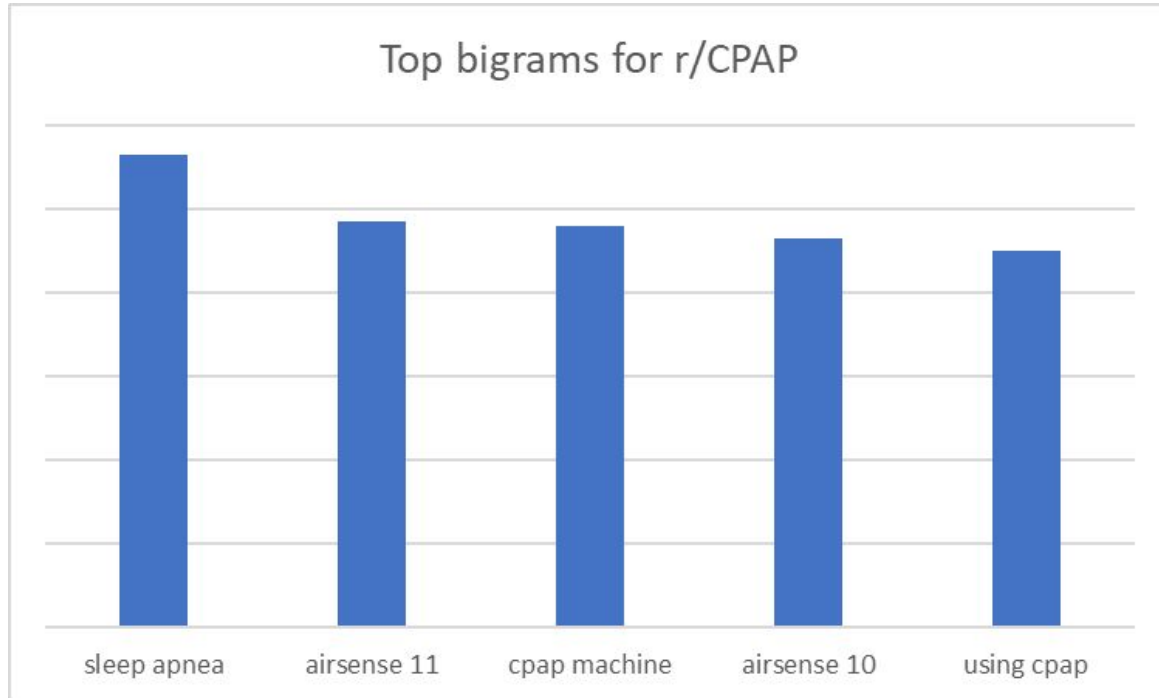
Top words



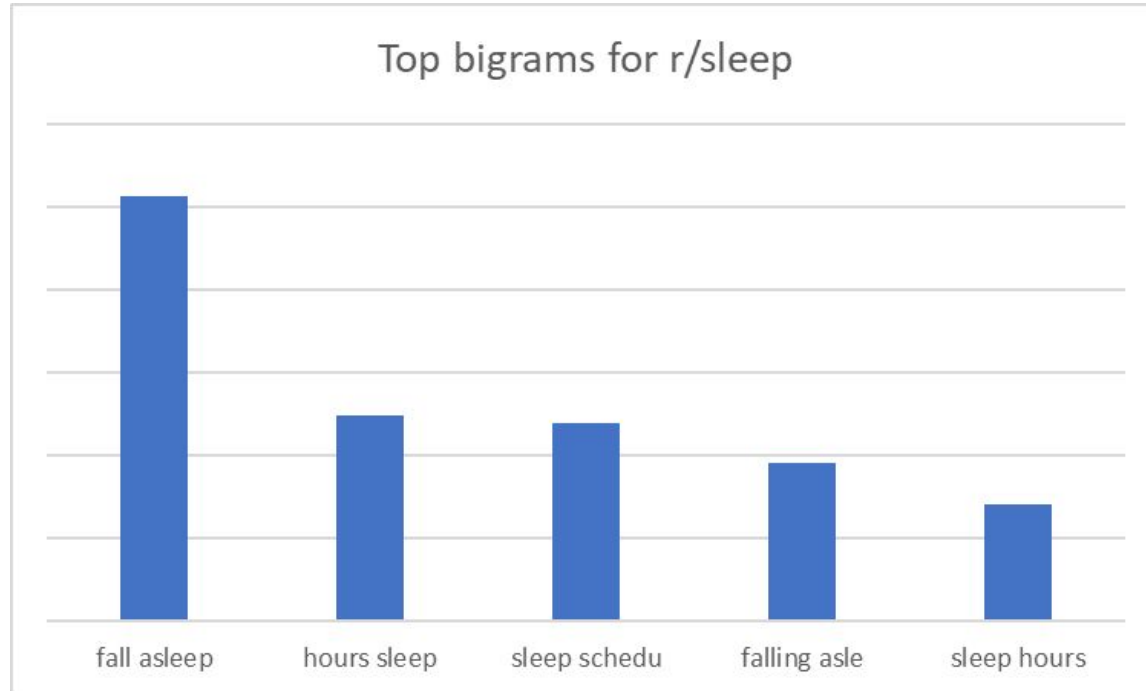
Top words



Top bigrams



Top words



Models



Model/Accuarcy	Null	NB (TF-IDF)	LG (TF-IDF)	KNN (TF-IDF)	DT (CVec)	AdaBoost (CVEC)
Train Score	0.514	0.972	0.999	0.999	0.914	0.997
Test Score	0.514	0.940	0.940	0.808	0.875	0.913

Recommendations



Use the Logistic Regression with the TF-IDF vectorizer for speed and accuracy

Recommendations



Product Development

1. Include a medical diffusers
2. Include speakers
3. Update app for CPAP users

Recommendations



Advertising

1. Include the element of time for non-CPAP users
2. Raise awareness of sleep apnea