EXPLORING TOPICS AND THE SENTIMENT OF NEW YEAR'S RESOLUTION TWEETS

Jim Peterman, PhD

GitHub: JimPeterman

BACKGROUND

- Many people make New Year's resolutions to better their lives.

- The majority of individuals (~60-80%) fail to keep their resolutions.

- To help individuals make lasting changes, different types of support are needed depending on the topic of the resolution.

BACKGROUND

Objectives

1. Determine topics that people are tweeting about related to New Year's resolutions.

2. Explore the overall sentiment of tweets related to New Year's resolutions.

Goal

- Identify how we can best support individuals to keep their resolutions and improve their health and well-being.

METHODS: DATA

- 16,660 Tweets scraped using Tweepy and the terms:

  - "New Years Resolution" (5,000 tweets), "2022 Resolution" (5,000 tweets)

  - "#NewYearResolution" (5,000 tweets), "#NewYearsResolution" (1,660 tweets)

- Time Frame: January 5, 2022 – January 19, 2022

- Search included only tweets in English and excluded retweets that did not have a user comment.

- Features included: text of tweet, number of favorites, number of retweets, username, and user ID.

METHODS: MODELS

Topic Modeling

- Exploratory data analysis with: CountVectorizer and TfidfVectorizer as well as LSA, NMF, LDA.

- CorEx used to finalize the topics using the terms found in the exploratory analysis.

- WordCloud to create a word cloud for each topic.

Sentiment Analysis

- Utilized VADER to explore the general sentiment of different topics and the most popular tweets.

TOPIC MODELING

"New Years Resolutions" and "2022 Resolutions"

- Politics
- Finances
- Travel
- Hopes/dreams/goals
- New beginnings
- K-Pop band
- Giveaways

TOPIC MODELING

"#NewYearsResolution" and "#NewYearResolution"

- Abstaining from alcohol
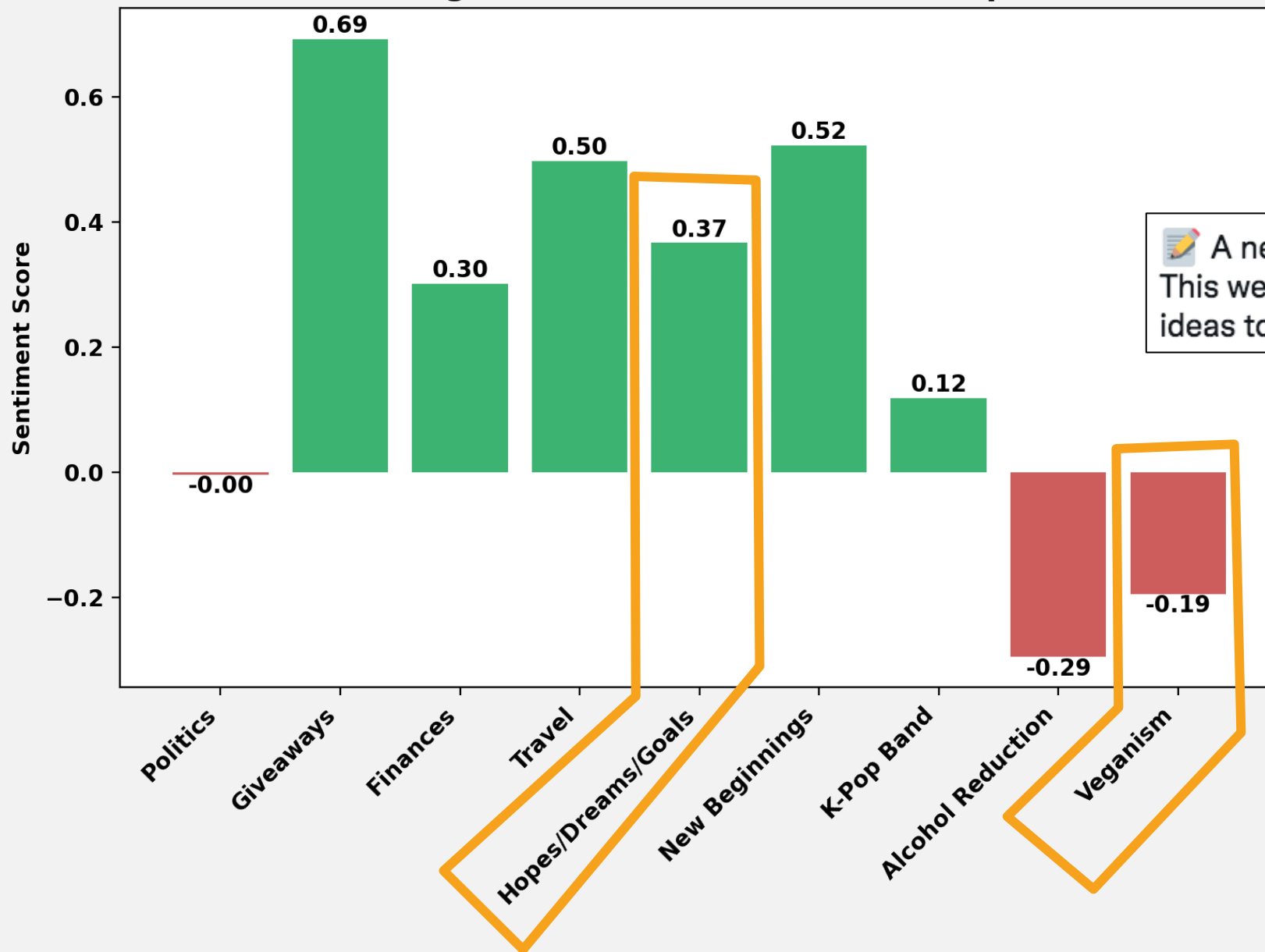- Veganism
- Crypto currency

SENTIMENT OF TWEETS

- Overall sentiment: 0.14 (overall positive)

- Most positive tweet: 0.98
- Most negative tweet: -1.00

Average Sentiment for Identified Topics

Sentiment Score

Politics -0.00
Giveaways 0.69
Finances 0.30
Travel 0.50
Hopes/Dreams/Goals 0.37
New Beginnings 0.52
K-Pop Band 0.12
Alcohol Reduction -0.29
Veganism -0.19

📝 A new year means new goals, hopes, and dreams. This week we've been reflecting on a few resolution ideas to share for some 2022 inspiration:
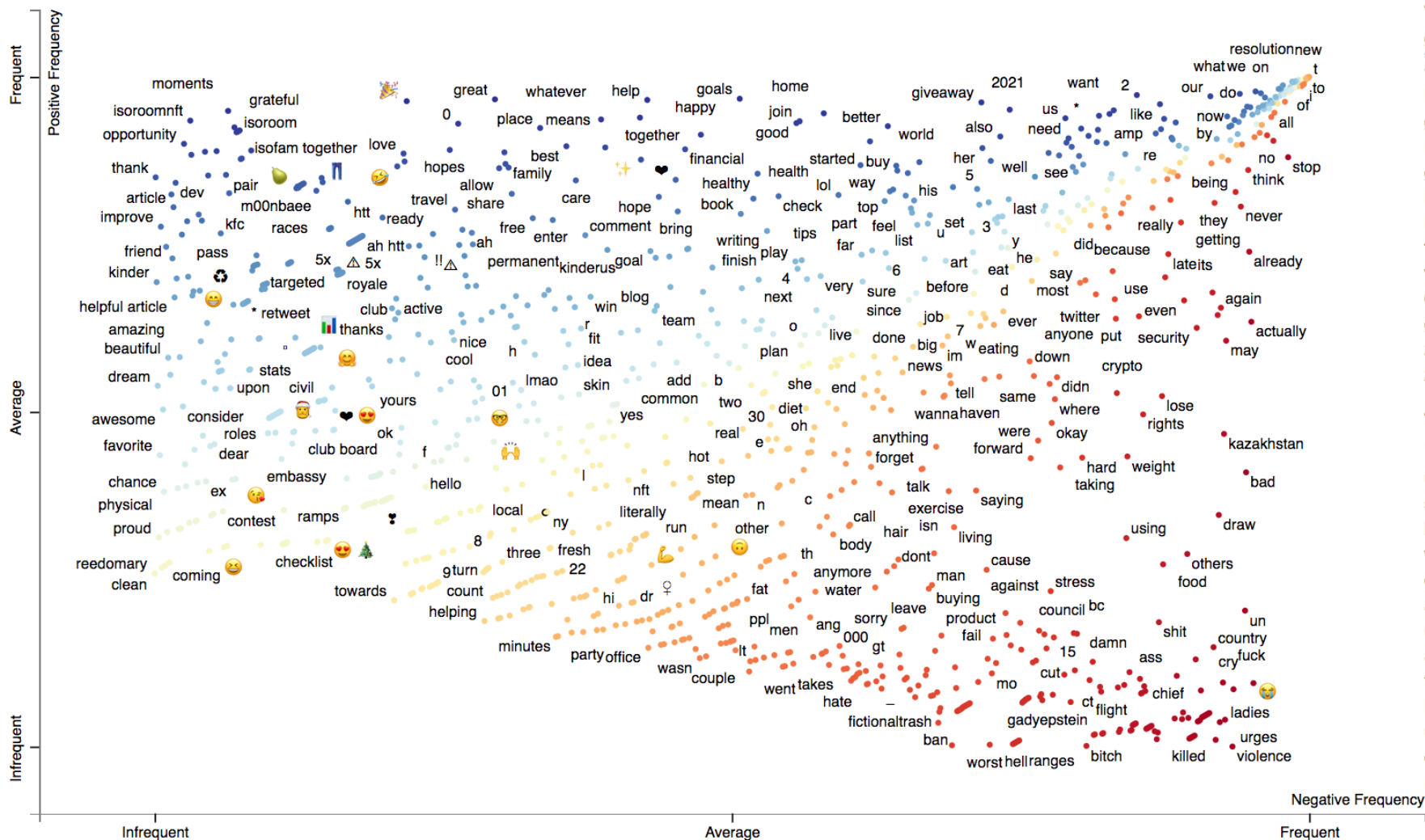
* Most favorited tweet in this topic (1,244 likes)

Sentiment score: 0.67

CONCLUSION

- Tweets about New Year's resolutions cover a variety of topics.

- There are already many tweets about setting goals and using New Year's resolutions as an opportunity to improve (so more tweets on this topic are not needed)

- Positive tweets about alcohol consumption and diet could be an area to target to support individuals with their New Year's resolutions.

SCATTERTEXT

Positive document count: 4,858; word count: 96,873
Negative document count: 1,773; word count: 32,593