



# Can Anyone Hear Me?

A Twitter Recommendation Engine

Creating more inclusive  
social spaces

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# THE ATTENTION ECONOMY



6,000

tweets are tweeted on Twitter every second.  
- Brandwatch

72%

of the public uses some type of social media.  
- Pew Research Center

73%

of Gen Z (18-22 year olds), report "always" or "sometimes" feeling alone.  
- Cigna Corp

# AIMS & OBJECTIVES

Create a content-based recommender system using Tweets that a user has favorited only.

- Topic modeling
- Sentiment analysis
- Dimensionality reduction / clustering
- Personality classification

The goal is to create interpersonal connections without saturation of original content from a user.



# PROCESS & TOOLS

Data Wrangling

Data Cleaning & Text Preprocessing

NLP Modeling

Personality Classification

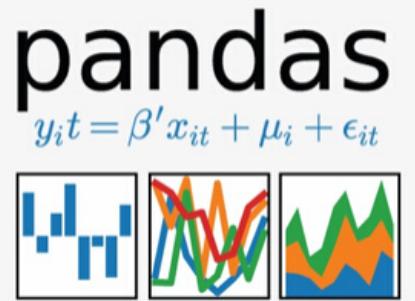
Recommender System

Dashboard Development



Google Cloud Platform

Tweepy



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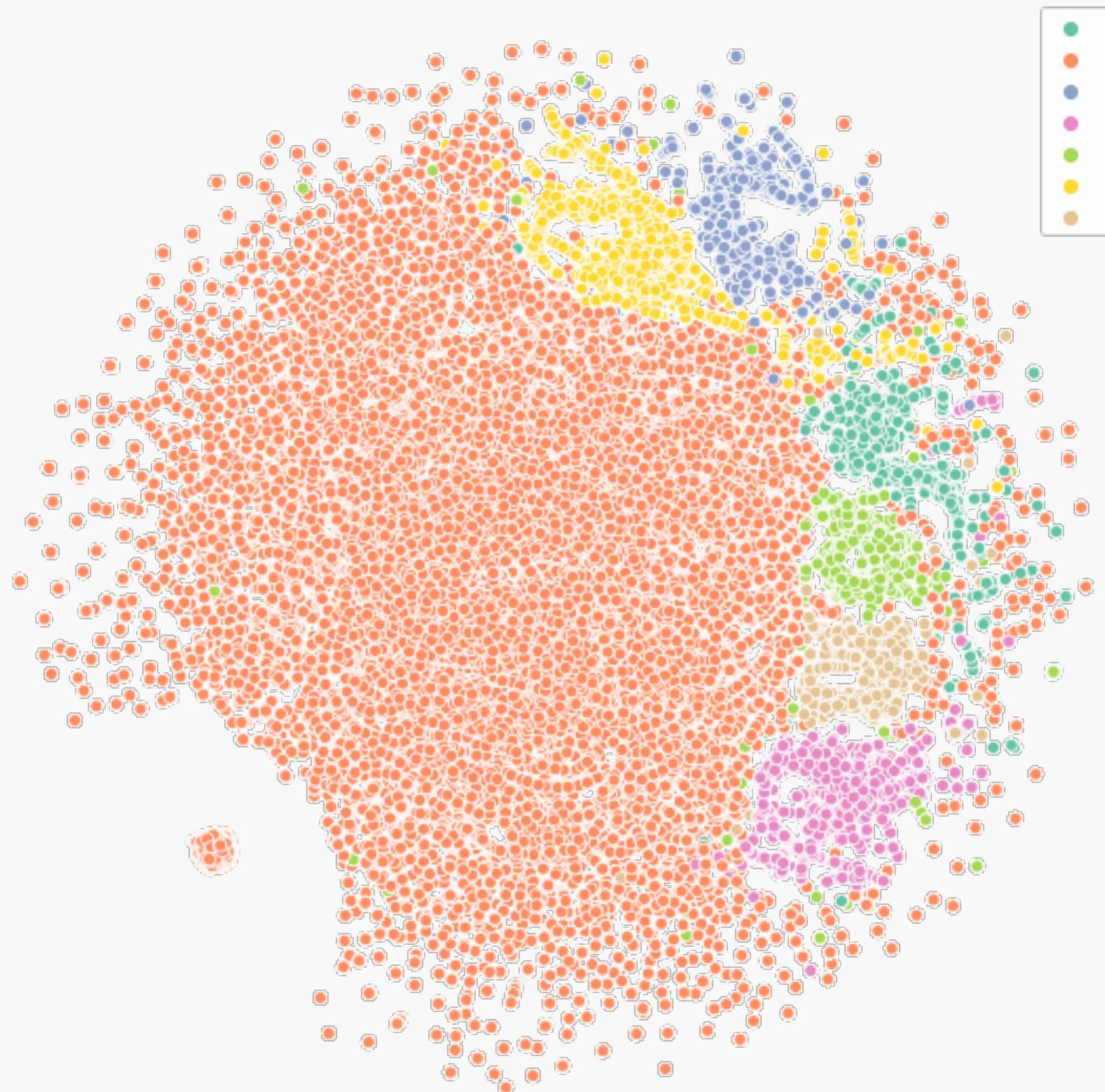
# FEATURES

- Twitter profile attributes
- Topic distribution of tweets
- Sentiment per topic
- Personality classification



# TOPIC MODELING

UMAP Projection of Tweets

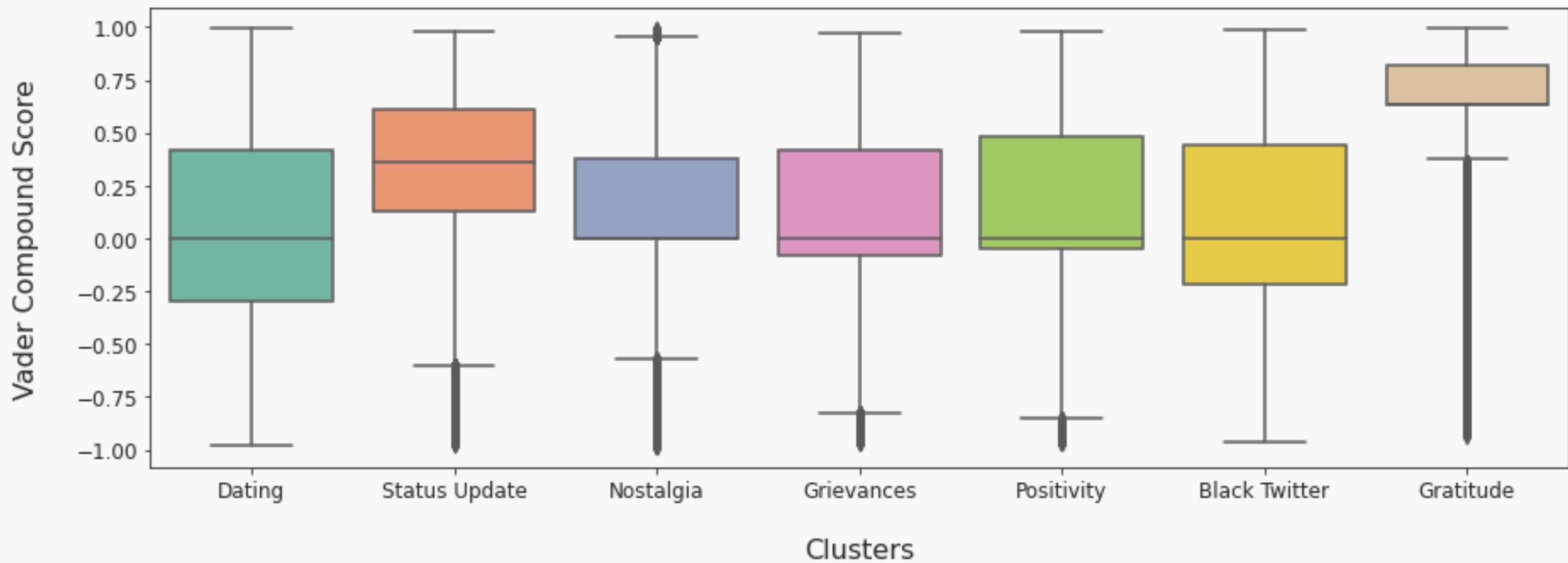


- Topic 0 - Dating
- Topic 1 - Status Update
- Topic 2 - Nostalgia
- Topic 3 - Grievances
- Topic 4 - Positivity
- Topic 5 - Black Twitter
- Topic 6 - Gratitude

Topics derived from NMF are indicative of the various moods as well as the Twitter "communities" present within my ego network.

# SENTIMENT DISTRIBUTION

- Derivation of sentiment using Vader model
- Segmentation of sentiment by cluster (topic)
- Attribution of sentiment per topic per user





Openness

Conscientiousness

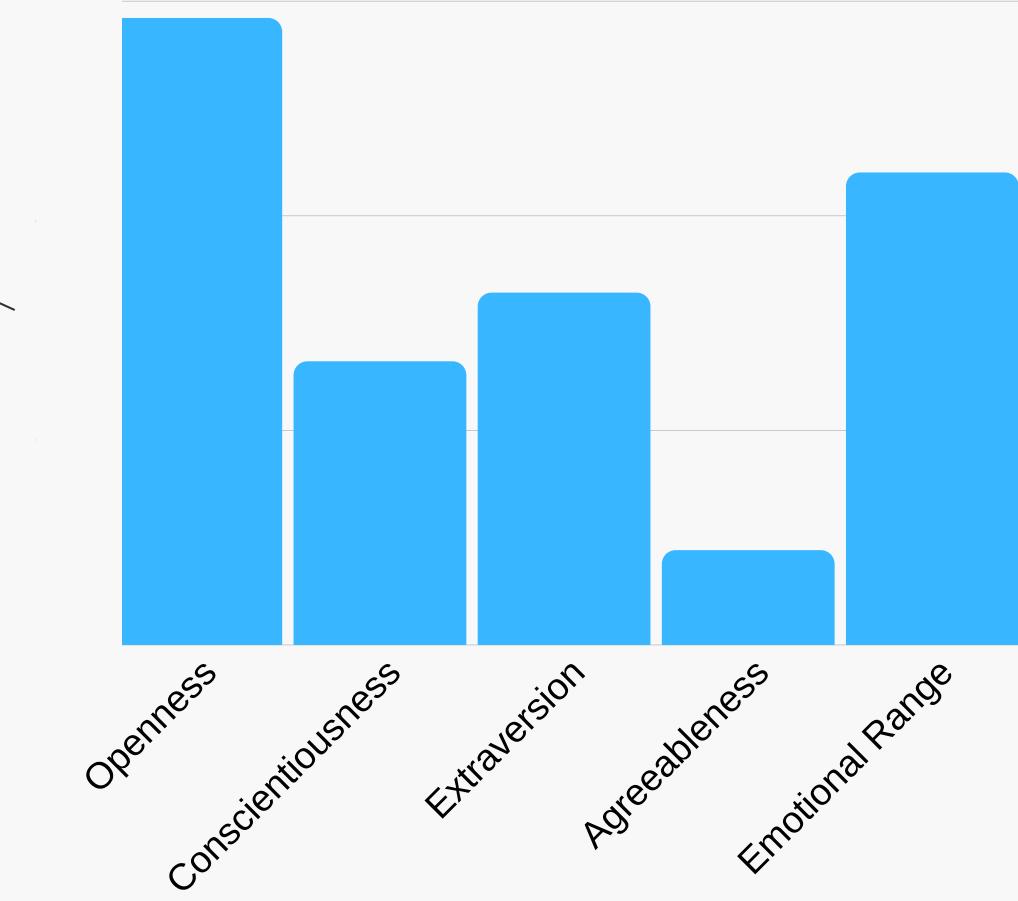
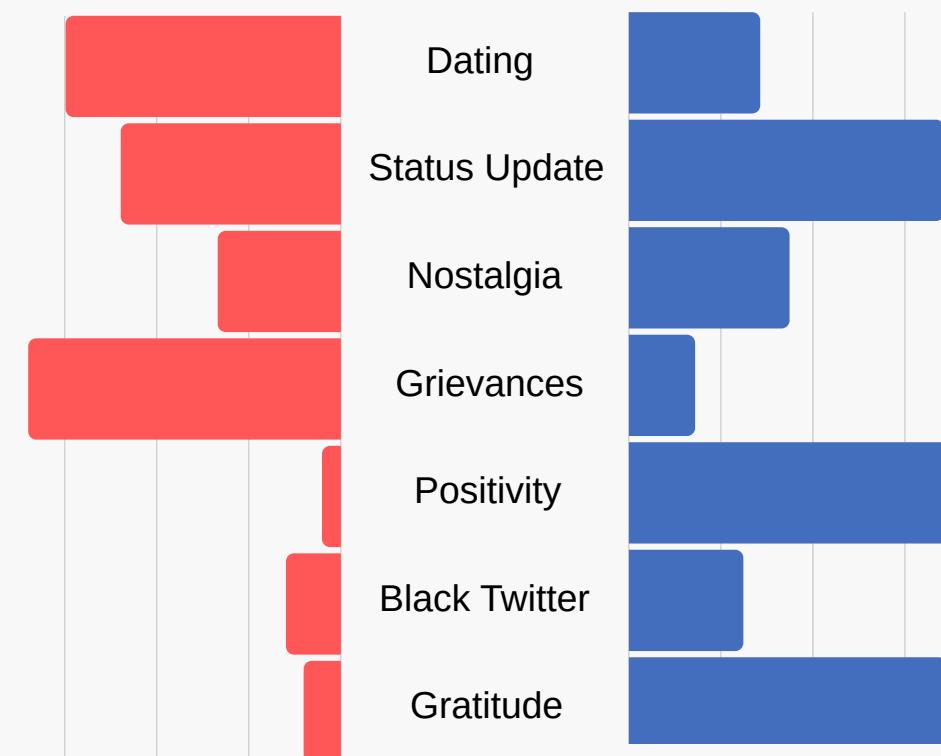
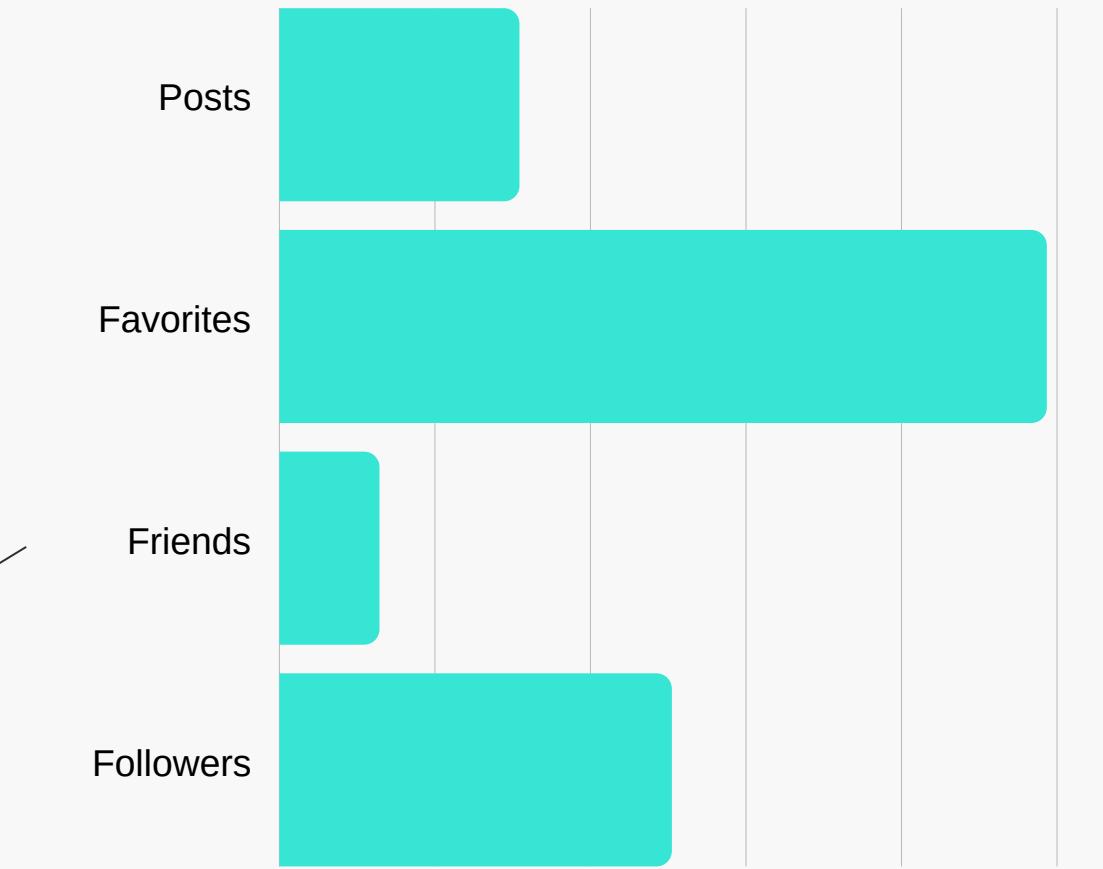
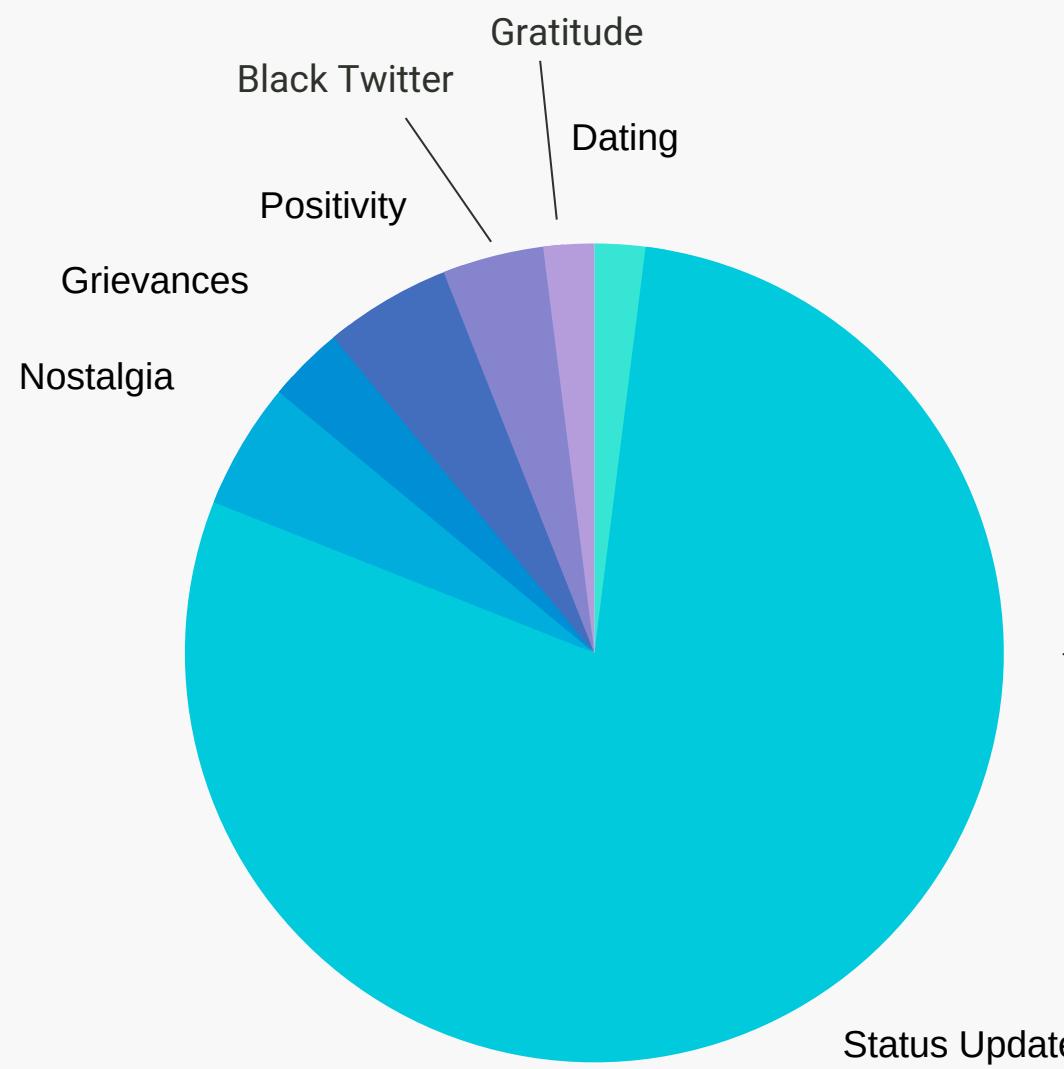
Extraversion

Agreeableness

Emotional Range

# CLASSIFICATION OF PERSONA

# BIRD'S EYE VIEW



# FIND YOUR TRIBE.

Find friends for  
\_heren

**vcegalla**  
96.00%  
percent match

**OGthesnackpack**  
92.35%  
percent match

**Bunsunkun**  
91.14%  
percent match

**Helen He**  
@\_heren  
I like food, puppies, and the internet.  
🔗 heren.me 📅 Joined February 2013  
54 Following 27 Followers

Tweets Tweets & replies Media >

**Helen He** @\_heren · Jan 1, 2015  
"Did they add marijuana to the soup?  
Why does it taste so good?" - My dad  
😂

1 1 1 1

**Helen He** @\_h... · Dec 31, 2014  
I'm about to cut this bitch if she tries  
to edge me out of my spot again

**Vince Egalla**  
@vcegalla  
The Japanese put little comics on twitter  
apparently.  
📅 Joined August 2013  
103 Following 117 Followers

Tweets Tweets & replies Media >

**Vince Egalla** @vc... · Jan 1, 2017  
読むのできない

**石田スイ** 🎯 @... · Dec 28, 2016  
「狂おしいほど聴こえるだろう?  
—...」無能/osterreich  
youtube.com/watch?v=JXao5Q...

# FUTURE WORK

- Model relationships using a network graph.
- Improve recommender via community detection algorithm.
- Expand network beyond first-degree connections.



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In the social jungle of human  
existence, there is no feeling  
of being alive without a  
sense of identity.

– Erik Erikson

A photograph of a young Black man with short hair, smiling broadly. He is wearing a light blue denim shirt over a white t-shirt. He is holding a light brown coffee cup with both hands. The background is filled with large, green, tropical leaves, possibly from a plant like a monstera. The lighting is bright and natural.

# THANK YOU

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