A Musician's Alter Ego

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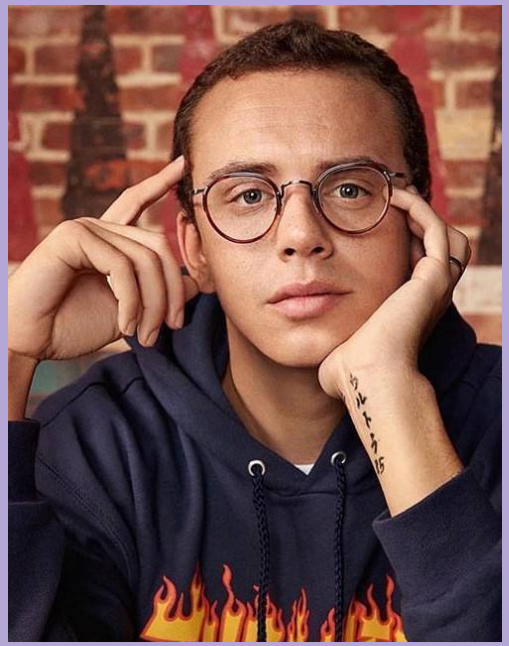
June 1st, 2018


camille

Robert Bryson Hall II

Logic

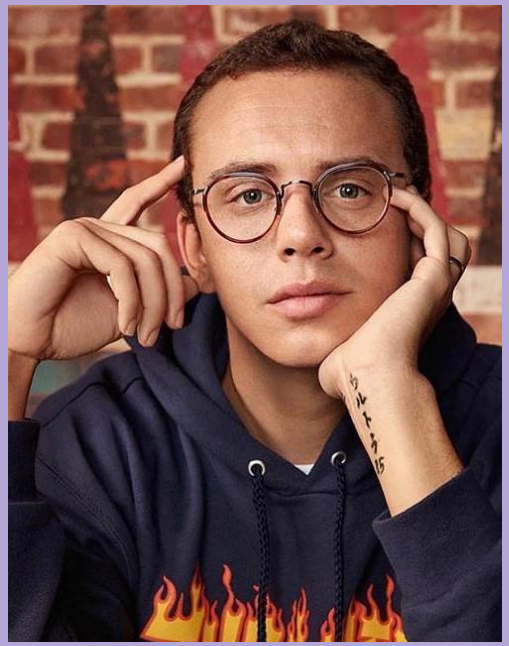


Young Sinatra

Bobby Tarantino

Robert Bryson Hall II

Logic



Peace, love, society

Young Sinatra

Success, motivated, vengeful

Bobby Tarantino

Outspoken, turn-up, carefree

Objectives

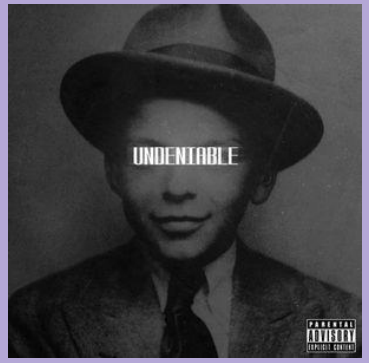
1. Cluster his lyrics into different groups
2. Predict if a line came from Logic, Young Sinatra, or Bobby Tarantino

Data

Logic

2,100 rows

Young Sinatra



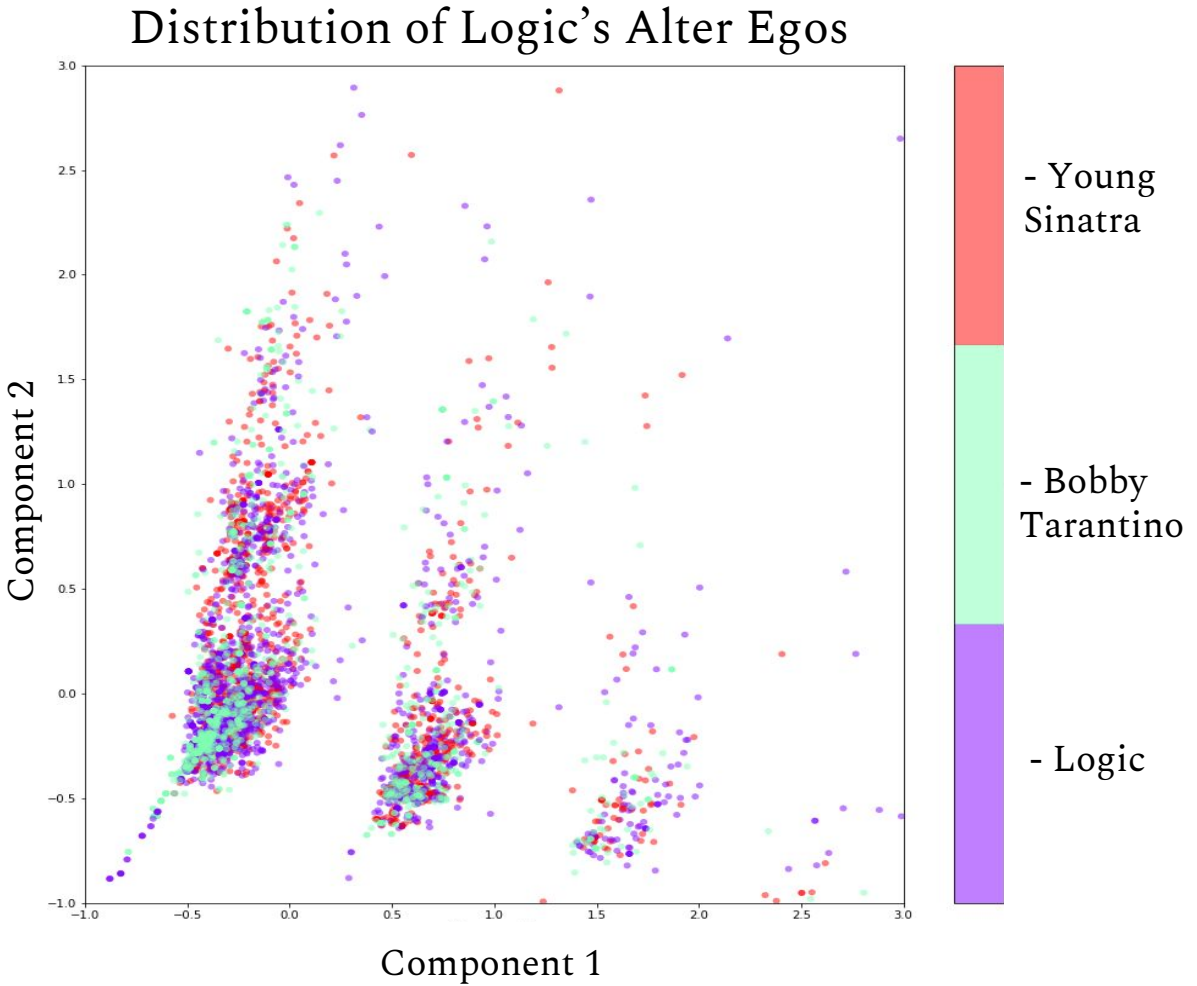
2,000 rows

Bobby Tarantino

1,800 rows

Unsupervised Clustering

PCA


Distribution of Logic's Alter Egos
Component 2
Component 1
3.0
2.5
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
- Young Sinatra
- Bobby Tarantino
- Logic

LDA

Alter Ego Topics

Let's revisit his 3 alter-egos and their corresponding topics:

Logic	Young Sinatra	Bobby T.
- Peace - Love - Society	- Success - Motivated - Vengeance	- Outspoken - Turn-up - Carefree

LDA Topics

LDA best split the text into 2 topics. Here are the top terms for each topic:

Topic 1	Topic 2
- Everybody - Love - Mind - People - World	- Money - Nobody - Livin - B*tch - Give

LDA Topics

LDA best split the text into 2 topics. Here are the top terms for each topic:

Topic 1	Topic 2
- Everybody - Love - Mind - People - World	- Money - Nobody - Livin - B*tch - Give
Logic!	Young Sinatra/Bobby T!

Supervised Classification

Models

Features

Algorithms

	Bag of Words	tf-idf	Spacy Features	Word2Vec
Multi N.B.	0.672	0.674	0.427	0.417
KN Classifier	0.604	0.646	0.532	0.592
SVC	0.601	0.429	0.429	0.574

*metric = test set accuracy score


n [48]: who_said(['i want the world to be a better place'])
['Logic']
n [49]: who_said(['lets drink and party all night'])
['Bobby Tarantino']
In [ ]: who_said([''])

The End!

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Appendix

Agenda

1. Background & Objectives
2. Data
3. Unsupervised Clustering
4. Supervised Classification
5. Conclusion

Background & Objectives

Summary

1. Cluster his lyrics into different groups
    - **PCA**
    - **LDA (Topic Modeling)**
2. Predict if a line came from Logic, Young Sinatra, or Bobby Tarantino
    - Features: Bag of Words, SPACY, W2V, tf-idf
    - Modeling Algorithims: Multi N.B, KN Classifier, SVC

Models

Features

Algorithms	Bag of Words	tf-idf	Spacy Features	Spacy + BoW	Word2Vec
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