Predicting MBTI-attributes based on musical features

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Brief introduction to MBTI

Extraversion (E) - Introversion (I)

Sensing (S) - Intuition (N)

Thinking (T) - Feeling (F)

Judging (J) - Perceiving (P)

Problem and Conclusions

We wanted to improve Spotify's algorithm and the way it suggests songs for different playlists of the users

We wanted to introduce a more personal "edge" to the algorithm, believing that music and taste is more subjective in personality in contrast to the current algorithm

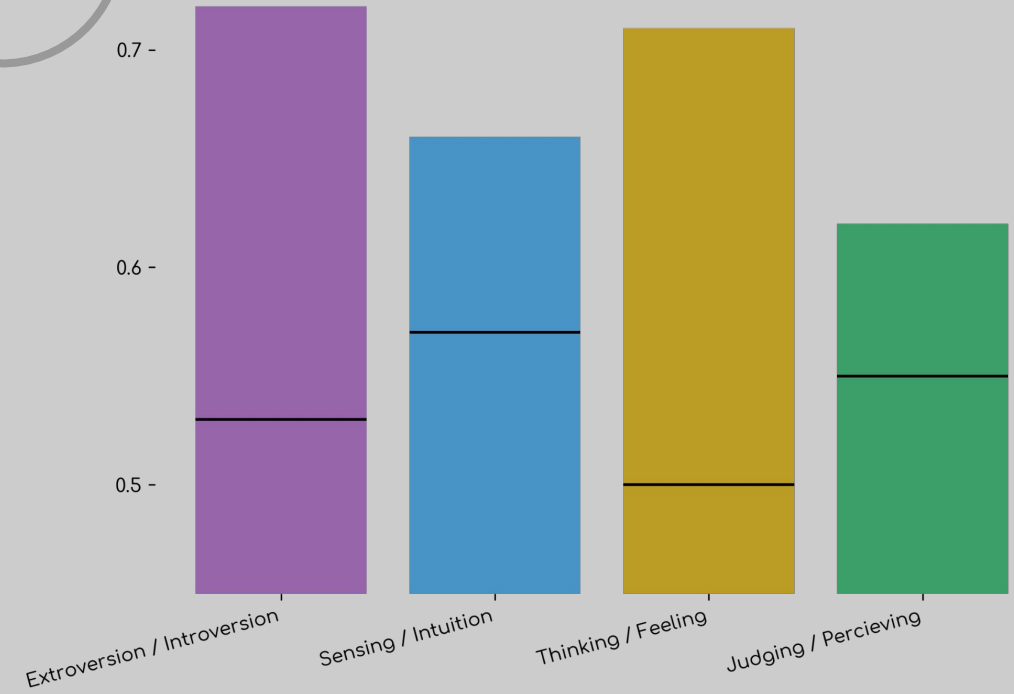
We found more predictability in Extraversion & Introversion as well as Thinking & Feeling

Overview of the Dataset

- 4081 playlists
  Crowd Sourced by spotify users with different MBTI
- Statistics over different musical attributes
  Danceability, loudness, mode, acousticness etc...
  Mean and standard deviation for each playlist
- Count of keys
  A, B, C, D... F#/Gb... Minor/major etc...
- MBTI
  ISFP, ENTP, INFJ etc...

Model Performances

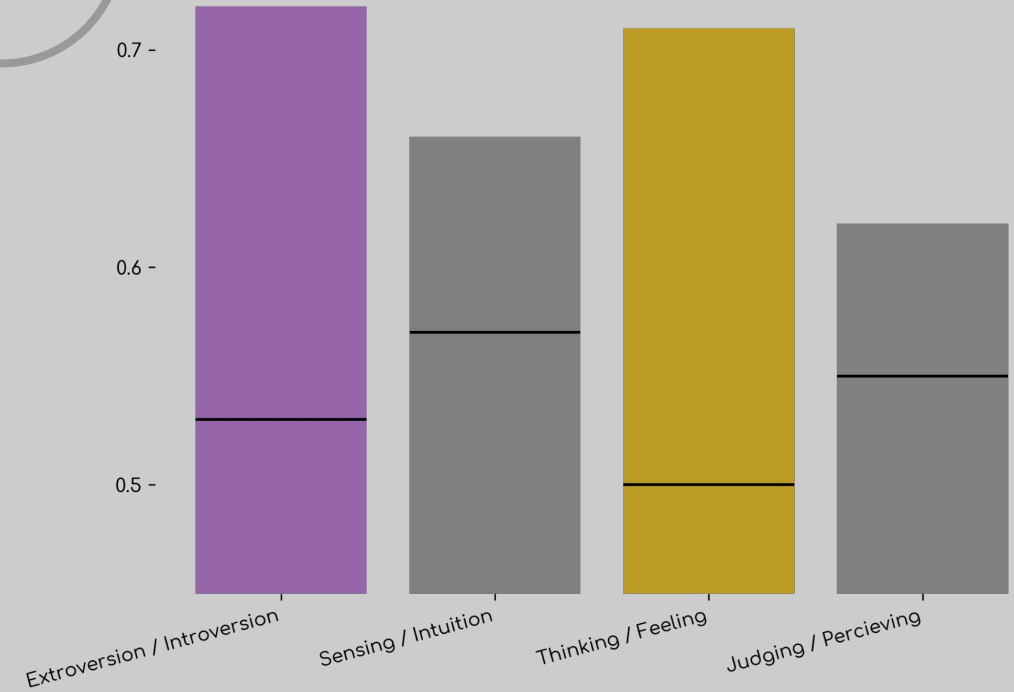
(Accuracy Scores)



- All models beat their baselines

Model Performances

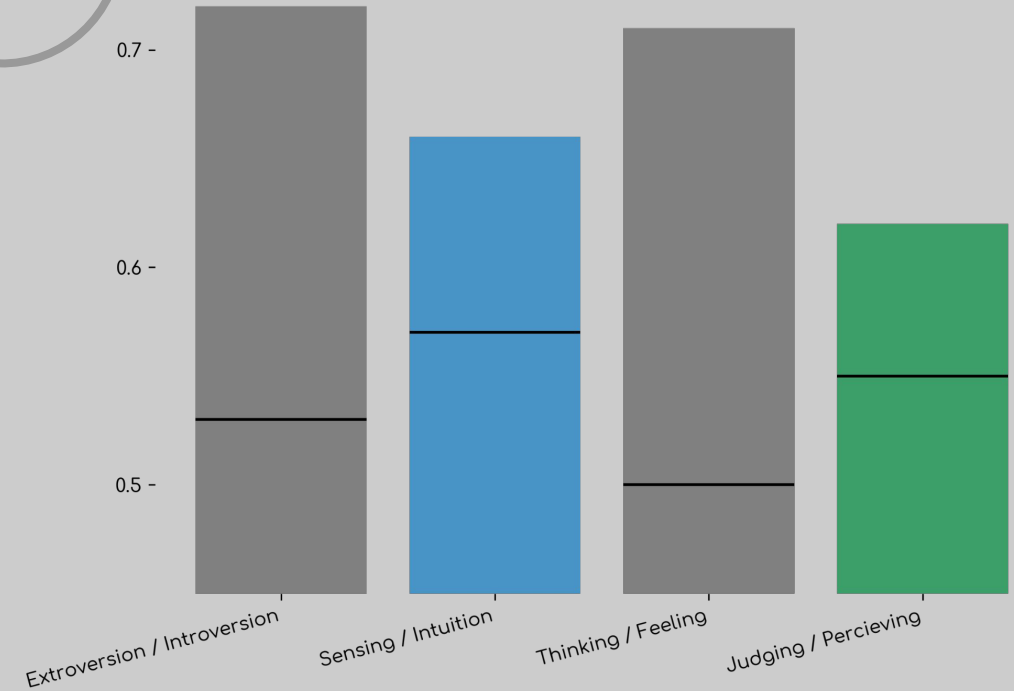
(Accuracy Scores)



- All models beat their baselines
- E/I & T/F had the best scores above 0.7
- Also the most distance from the baseline
  (T/F was the greater)

Model Performances

(Accuracy Scores)



- All models beat their baselines
- Neither of these models had scores above 0.6
- Feature engineering was challenging, requires more work

Conclusion and closing remarks

Highlights

- We can now link users and artists based on personalities in music
- Especially distincting between Introversion and Extroversion
- More models, More learning

Challenges

- Some were better than others...
  (S/N - J/P)
- Feature Engineering
  (Needs more work...)
- Allocating focus
  (Focusing on the classifications that were more easily predicted)