

Now Featuring

Music genre classifier using Spotify audio features



Introduction

Motive:

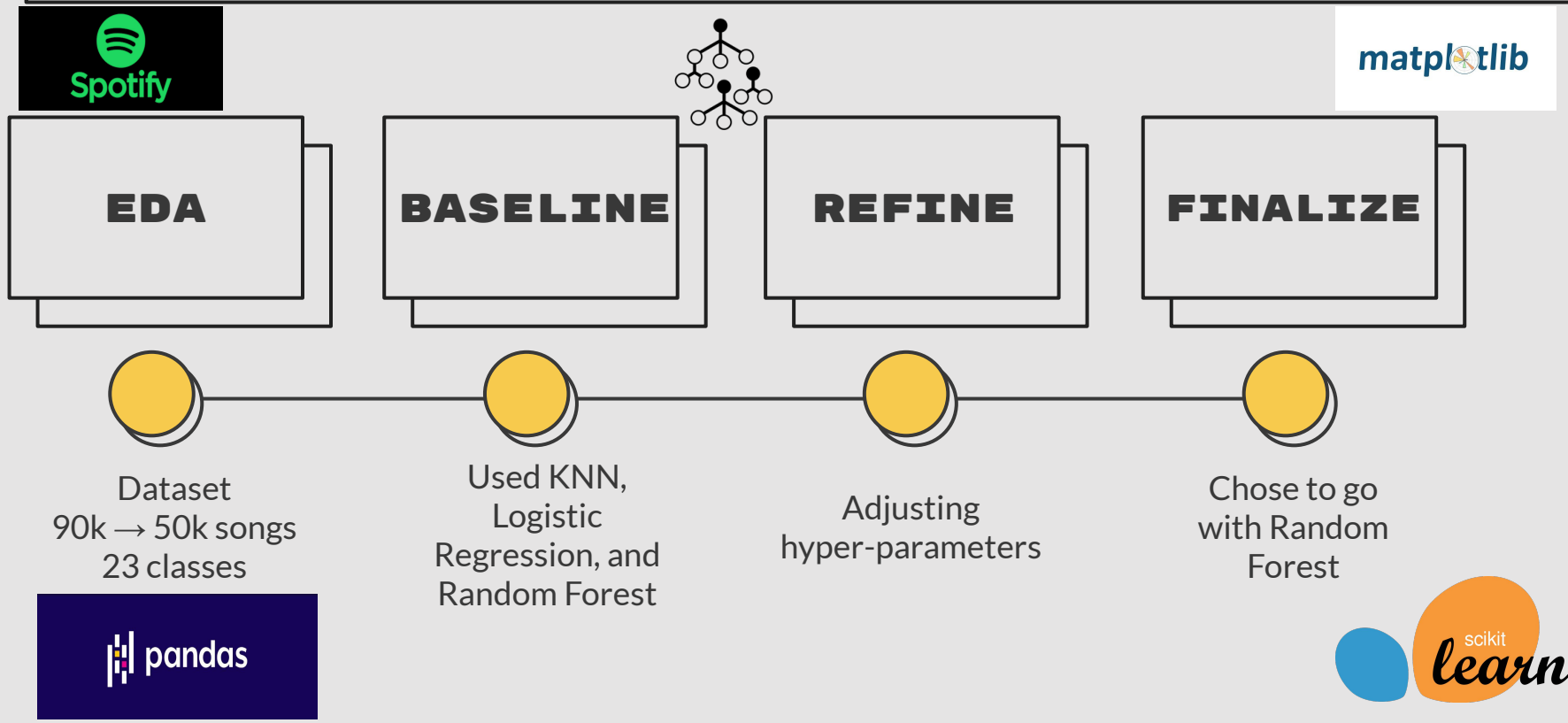
- Genres today are getting more and more ambiguous.
- Want to create a model that helps classify genres based on spotify audio features
- Hope to help new artists get a grasp on how Spotify may categorize the genre of their music

Objective/Goals

- Create a classification model that will take in audio feature metrics and predict the genre.
- Objective is to be able to accurately predict songs genres



Workflow



Results

KNN

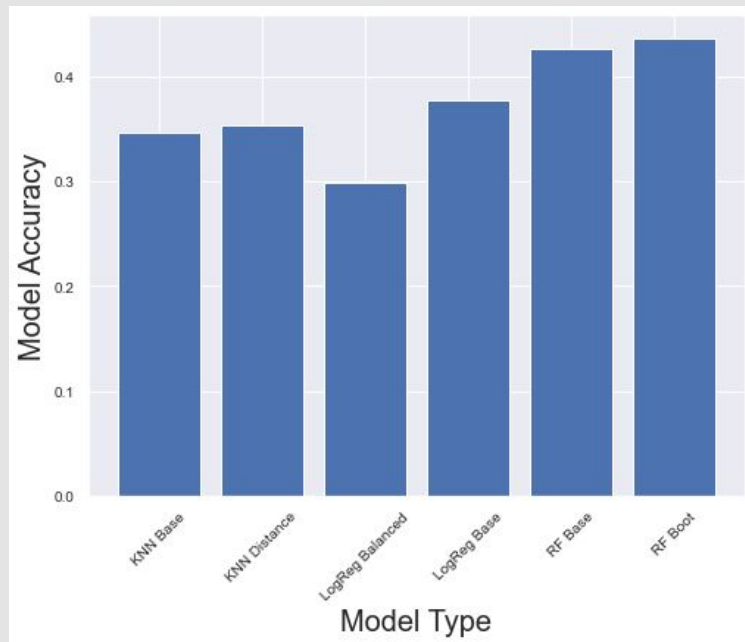
- Baseline accuracy = .347
- Distance Weighted = .354

Logistic Regression

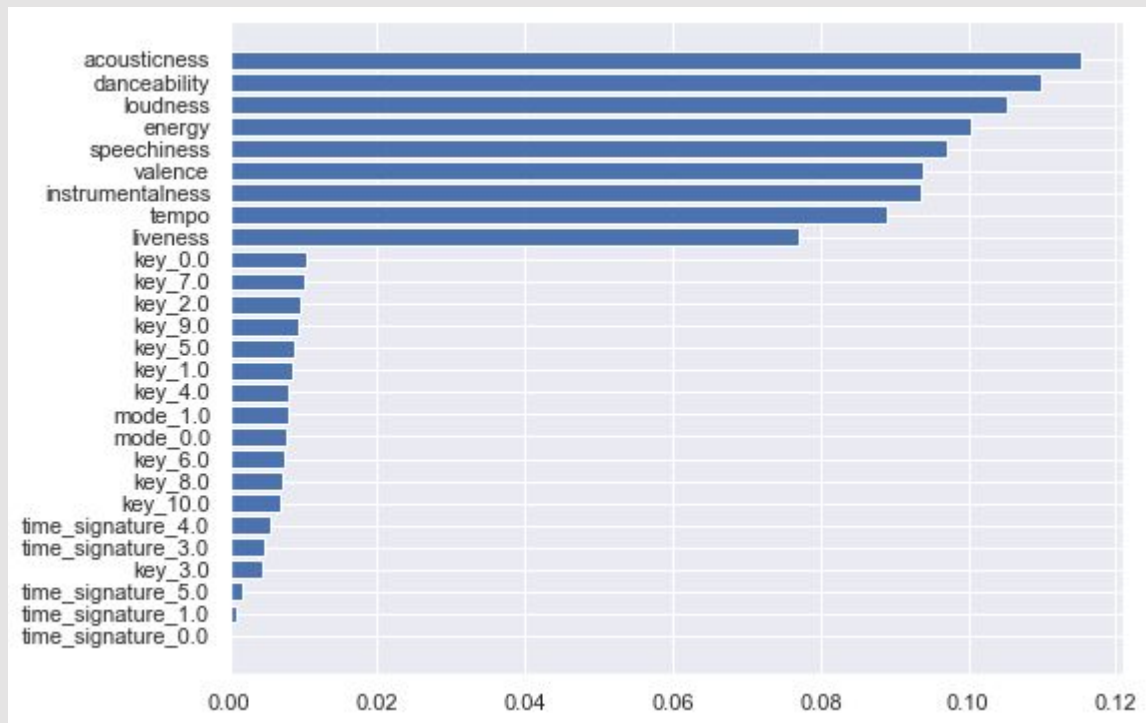
- Baseline accuracy = .377
- Balanced class weight = .299

Random Forest

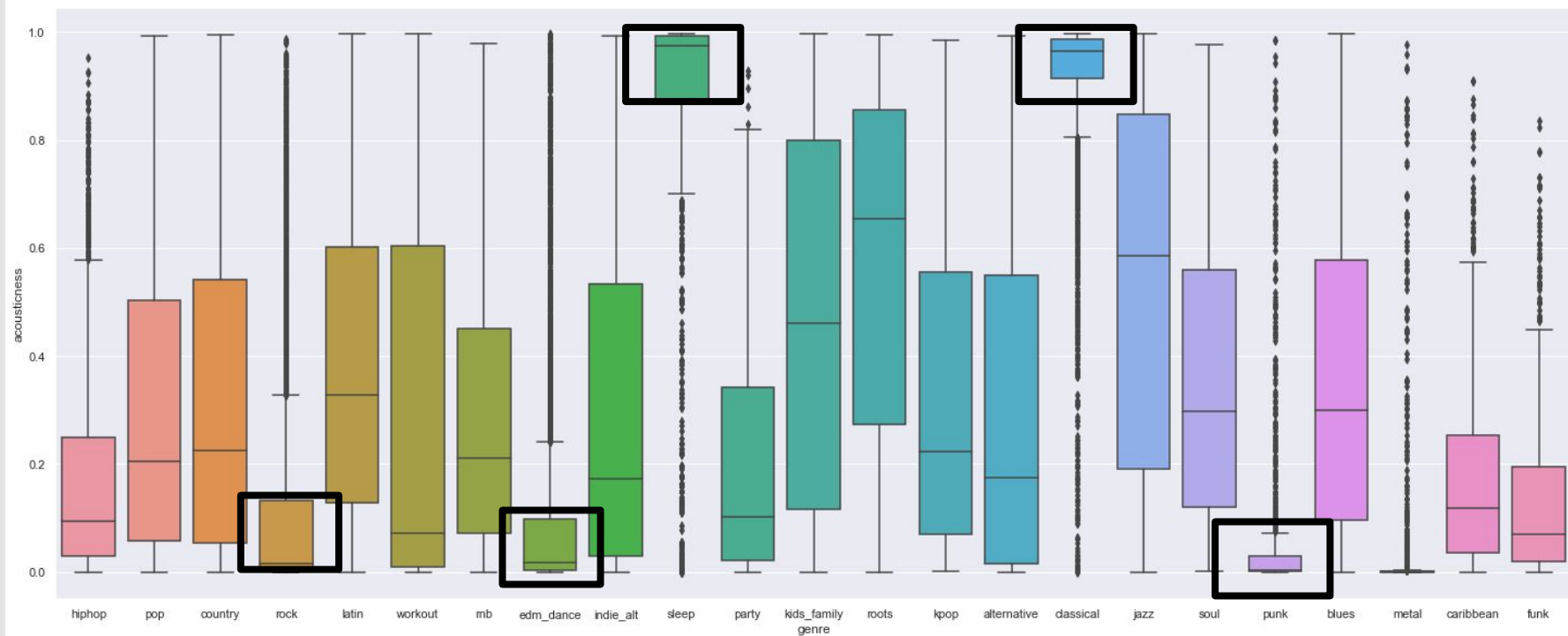
- Baseline accuracy = .427
- With Bootstrapping = .437



Feature Importance



Feature Importance(Acousticness)



Performance

Where is it good?

Hip-hop:

- DNA - Kendrick Lamar correctly classified
- Acousticness = .023
- Danceability - .638
- Energy = .523

Where is it bad?

Country:

- Had over 1,500 False positives



Conclusion

- This turned out to be a difficult problem to solve with a large number of classes
- Model faced the most confusion with Country and Classical (False Positives)
- Did better with Hip-hop genre

FUTURE WORK

A black and white photograph of a DJ's hands on a mixer. The DJ is wearing a dark shirt. The mixer has two large silver-colored jog wheels on the left and right, and several knobs and faders in the center. The DJ's hands are positioned over the central controls. A bright yellow rectangular box with a thin black border is overlaid on the top left of the image, containing the text 'FUTURE WORK' in bold, black, sans-serif capital letters.

- Be able to implement this into an app that artists can use
- Take a look at song lyrics and see how those may relate to genre