

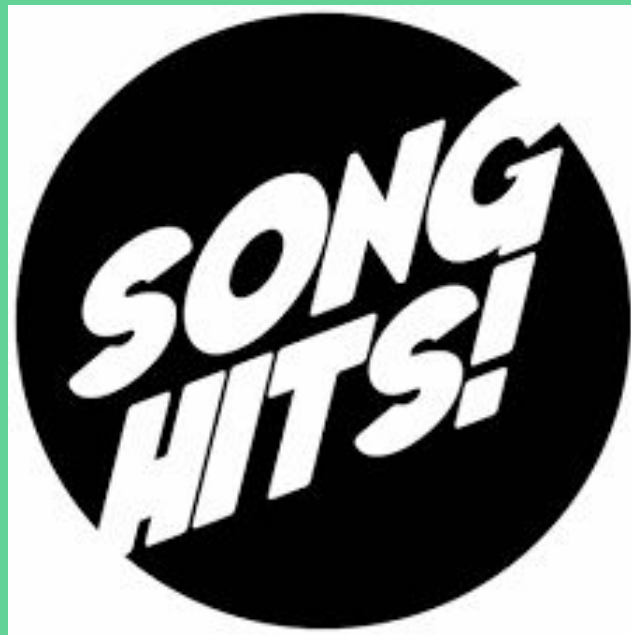
Spotify songs: will it be a hit?

Nicole Michaud



Business Problem

- Can certain features be used to determine ***whether or not a song will be a hit?***



Project Goals

- Determine what **features** are most important in correctly classifying songs as hits or not
- Use these findings to improve user suggestions to only recommend good quality songs



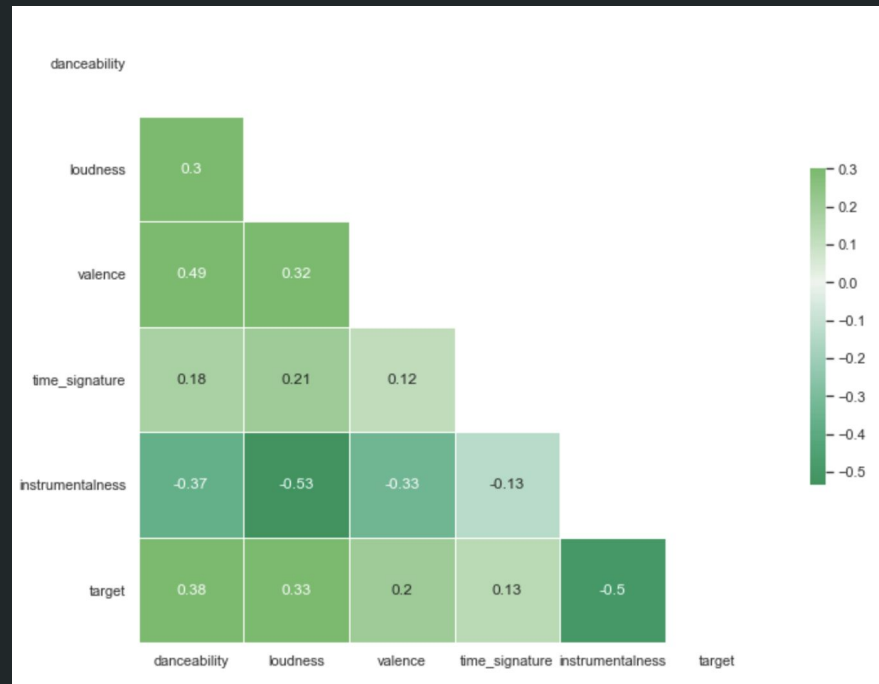
Data Understanding

- **6,398** total songs
 - ½ are hits and ½ are not.
- Data from **2010s** (1/1/2010 - 12/31/2019)

- **Hit song** - featured in Billboard's weekly list of Hot-100 tracks in last decade at least once
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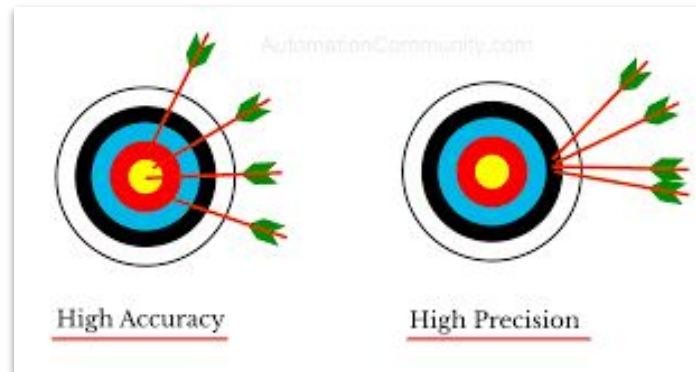
Data Understanding

- Features most correlated with being a hit:
danceability, loudness, valence, time signature, Instrumentalness
 - (Instrumentalness is *negatively* correlated)



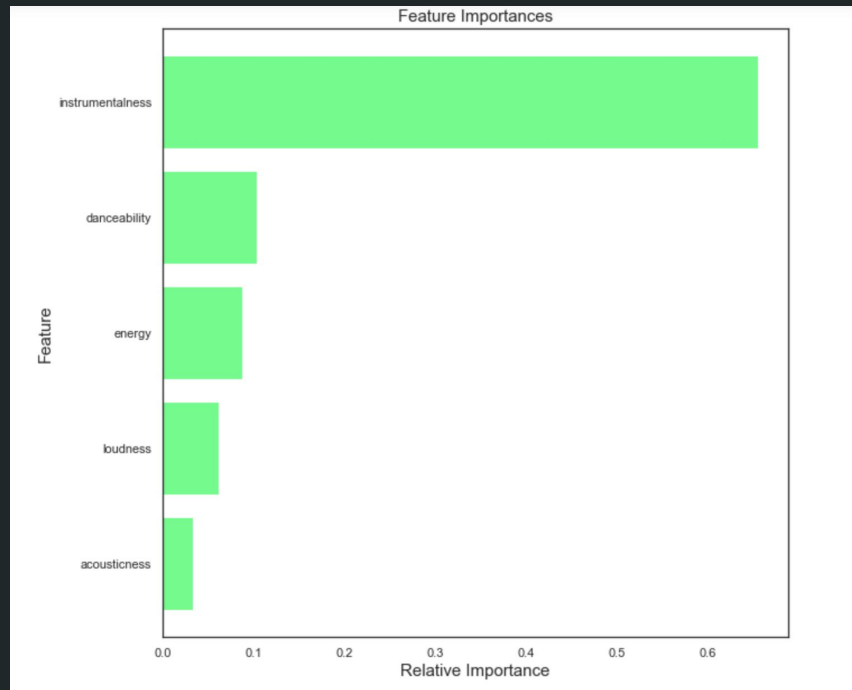
Methods

- Models were created and tuned to see which one performed best at correctly classifying songs as hits or not
- Evaluated based on **accuracy** and **precision**
 - Better to have more false negatives than false positives: ***We want to only recommend good quality songs to our users.***



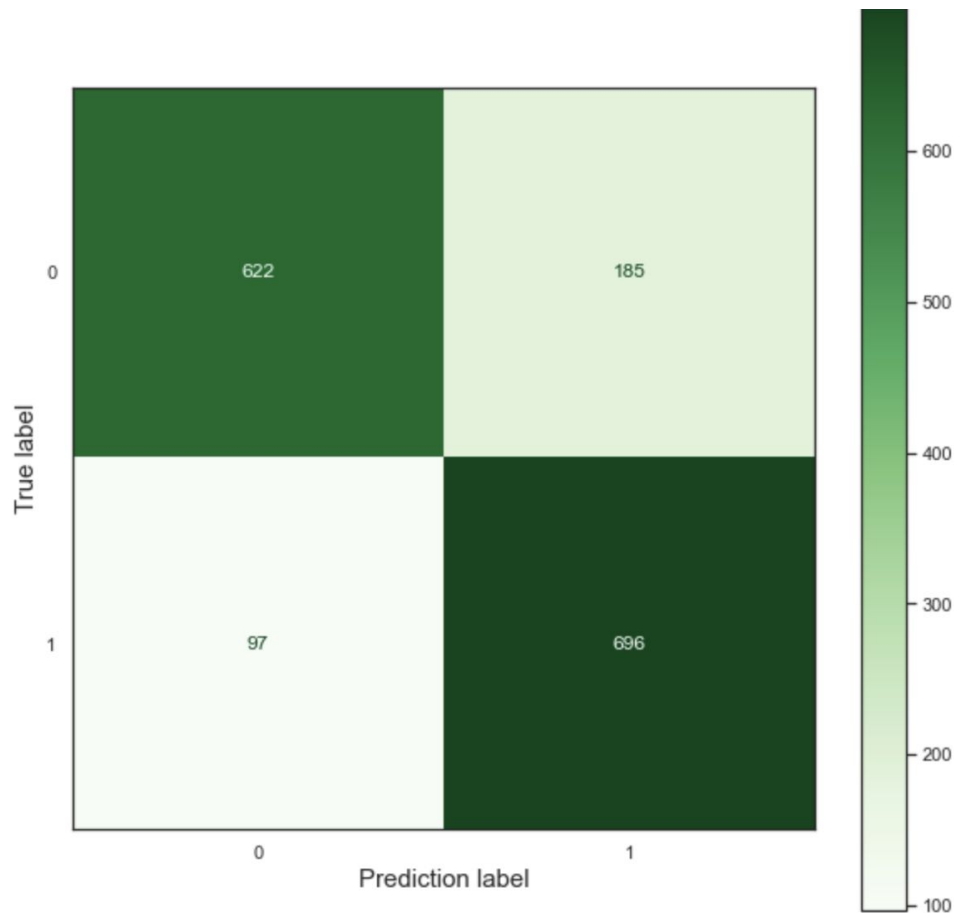
Results

- Our best model is about **81.8%** **accurate** and about **77.1%** **precise**.
- Most important features:
instrumentalness, danceability, energy, loudness, acoustiness



Results

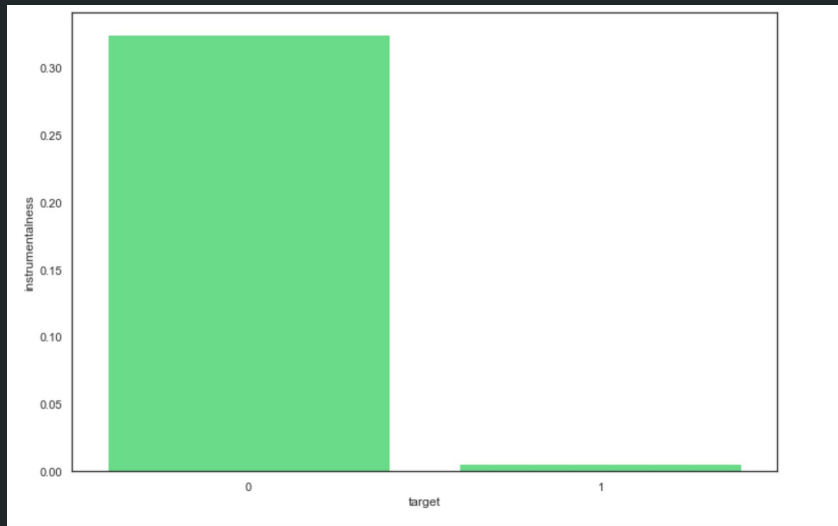
- This model has:
 - 185 **False Negatives**
 - 97 **False Positives**



Recommendations

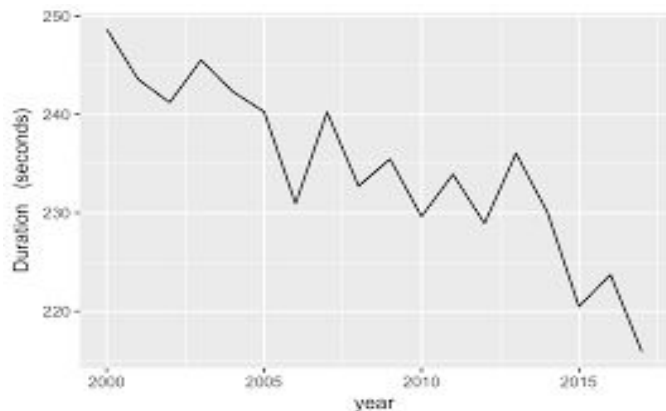
- Hit songs should have the following features:
 - **Danceability**
 - **Energy**
 - **Loudness**
 - **Acousticness**

- Make sure songs are not too **instrumental**:

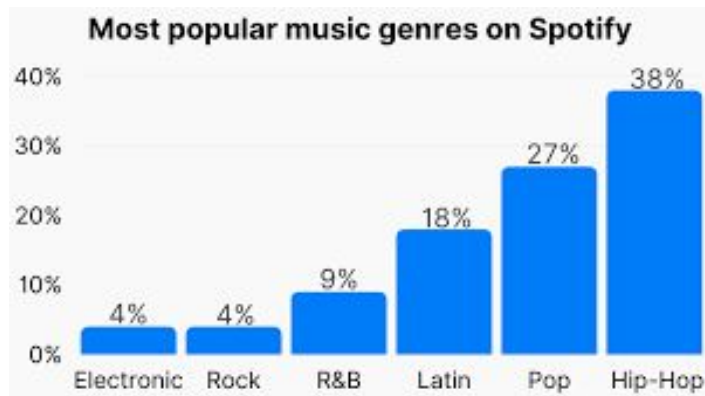


Next Steps

- Compare data from **other decades**



- Is **genre** an important factor?



Thank you!

- Any questions?
- Contact:
 - www.linkedin.com/in/nicole-michaud2

