

Music Genres by Spotify API

Project Three by Angie M

Project goals

Helping artists when creating their music.
Predicting which will be the most popular
genres for the next five years.



Data

The data for this project was retrieved through the spotify web API.

Spotify API works with ID. Therefore I used it for gather information about the artists, genre, year and songs. Including their artist and song popularity and followers by artist.



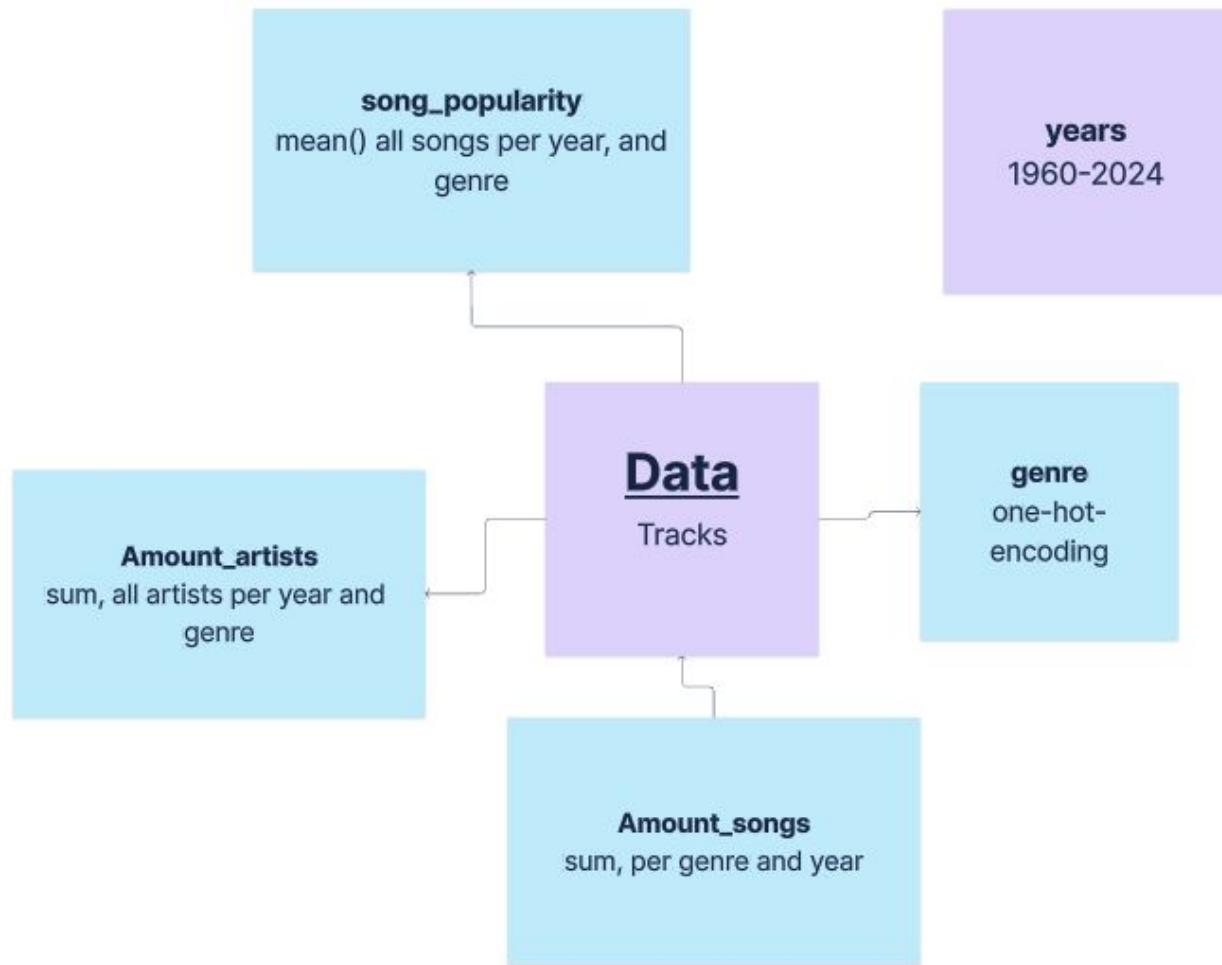
Datasets: Ended with one of shape 9477 rows x 8 columns

The ML Model

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Data for the machine learning model

- Weak positive linear and monotonic relationship but statistically significant
- Dataset shape: 575 rows x 5 columns



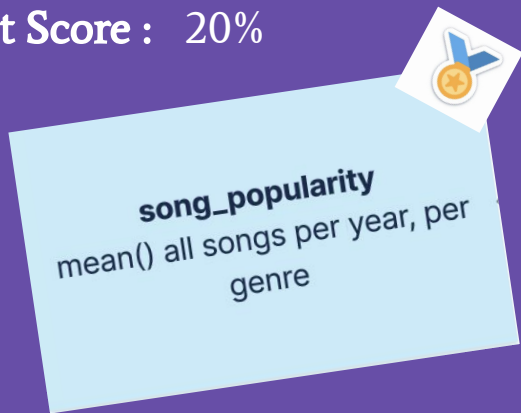
Results

First model:

- Supervised ML
- Random Forest Regressor
- **Predict:** The song popularity, depending of the genre chosen by the artist

Train Score: 89%

Test Score : 20%



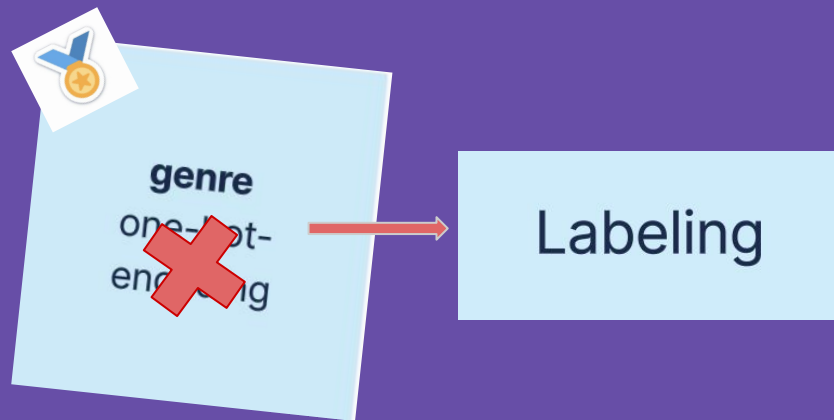
Second Model:

- Supervised ML
- Random Forest Classifier
- **Predict:** The genre depending of the number of songs released, and the popularity that it needs to have



Train Score: 99%

Test Score: 26%



Conclusions:

- My ML model is overfitting.
- More samples are needed
- More relevant data is needed, for instance sales by artists, information about the artists concerts and tours and more historical information from the artist

The EDA

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Let's move to Tableau

https://public.tableau.com/app/profile/angie.morales/viz/ProjectThree_17134478672950/Story1?publish=yes

The Dashboard

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Let's move to website

Created through Streamlit

Last conclusions:

I can advise artists that by musical genres:

- Rock, has been the most steady genre referring to popularity and artists
- Pop and rap genres are growing faster in the amount of artists and songs released in the last two decades
- Urban Latino genre is growing faster in song popularity and artist popularity, with less artists than pop and a bit more than rap
- It is advisable to release the song around summer (where the less percentage of songs are released-focusing in the genres mentioned above)
- Have a nice vibe in order to have a lot of fans!



Thanks
