



ALBum covers

Genre Trends

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What can be gathered from the results of the model

05

NEXT STEPS

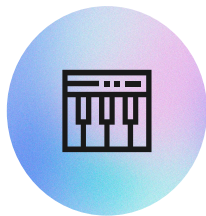
What could be done if we had more time/resources for this project

01



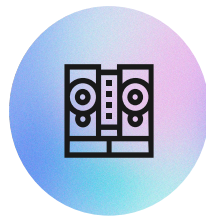
INTRODUCTION

context



ALBUM ART

Album art allows artists' creativity to blossom and can increase the album's popularity. The artwork is the first glimpse into the listening experience could be the deciding factor for listening.



Genre

Each genre has a unique set of sounds and albums can often span multiple genres. Color analysis of album art can be a key indicator of the predominant genre of the music in an album.



MOTIVATION

ALBUM artwork IS OFTEN THE
FIRST THING THAT a LISTENER
sees WHEN FINDING MUSIC



PERCEPTION

Artwork can affect
what the listener
thinks of the music



INTENTIONAL

Designed to
accompany the song
or album



COLORS

An important feature
of artwork is the
predominant color



Genre

Does album artwork
of a certain genre
contain the same
predominant color?



HYPOTHESIS

THE ALBUM ART COLOR FOR
SONG ALBUMS CAN
ACCURATELY PREDICT THE
GENRE OF A SONG AT A
RATE GREATER THAN **50%**.





O2 DATA

DATA COLLECTION



SPOTIFY API

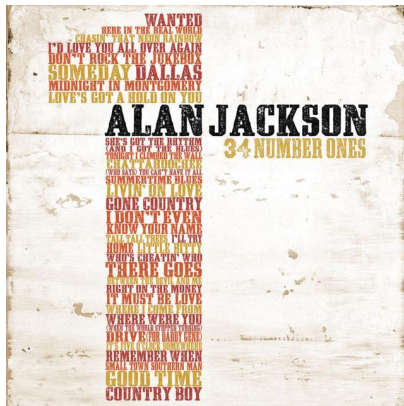
- Data collected from API requests in JSON format for each of six music genres
- Album art images downloaded from image URL field in JSON data
- 3184 total images collected

API request → JSON data → Image

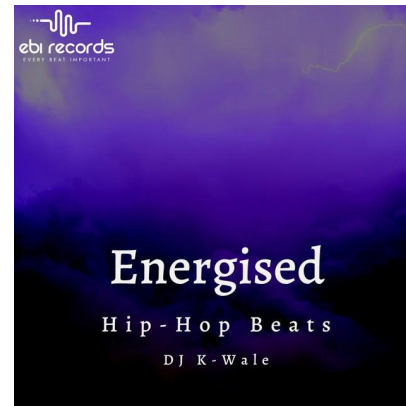
DATA EXAmPLes



Alternative



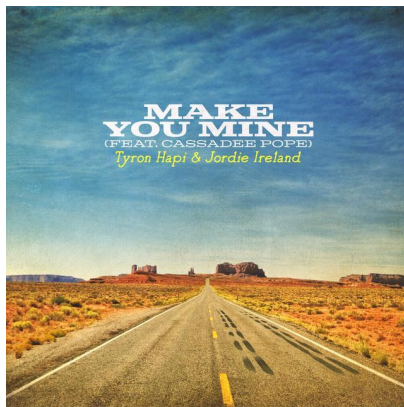
Country



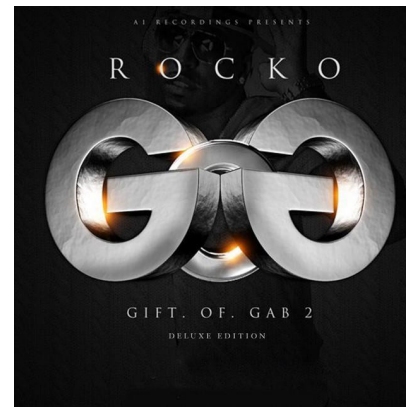
Hip-Hop



Jazz



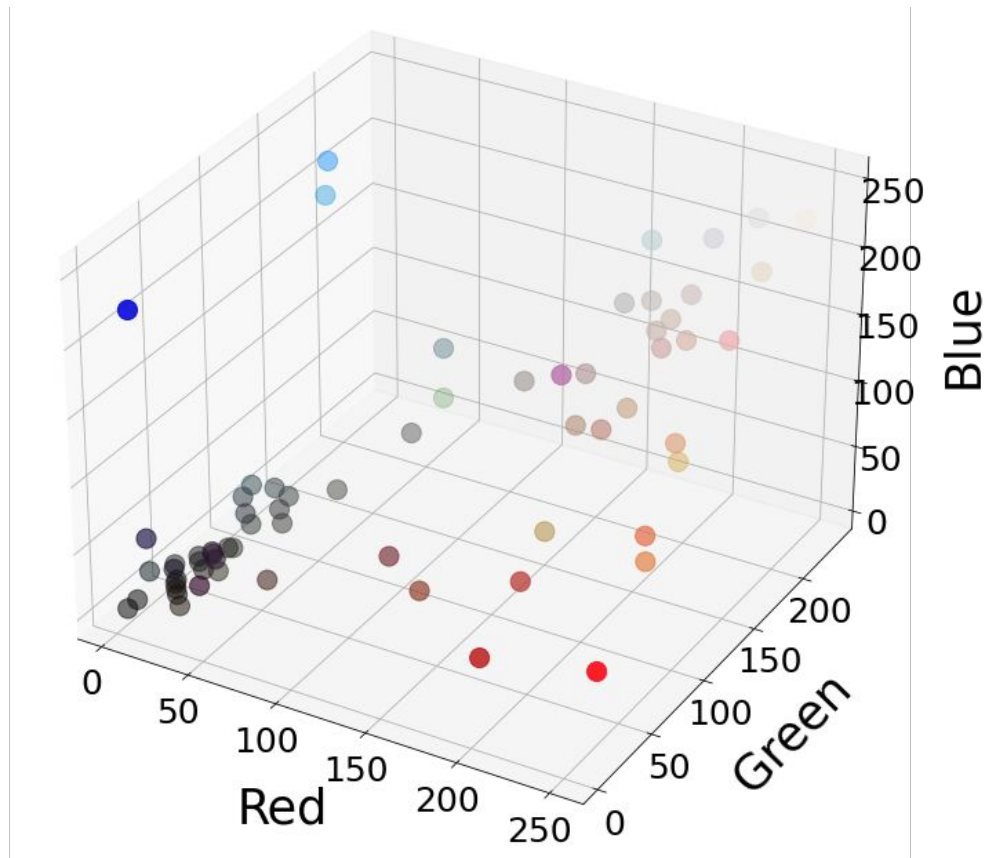
Pop



Rock

EXPLORATORY DATA ANALYSIS

Predominant
color in select
images in Pop
genre

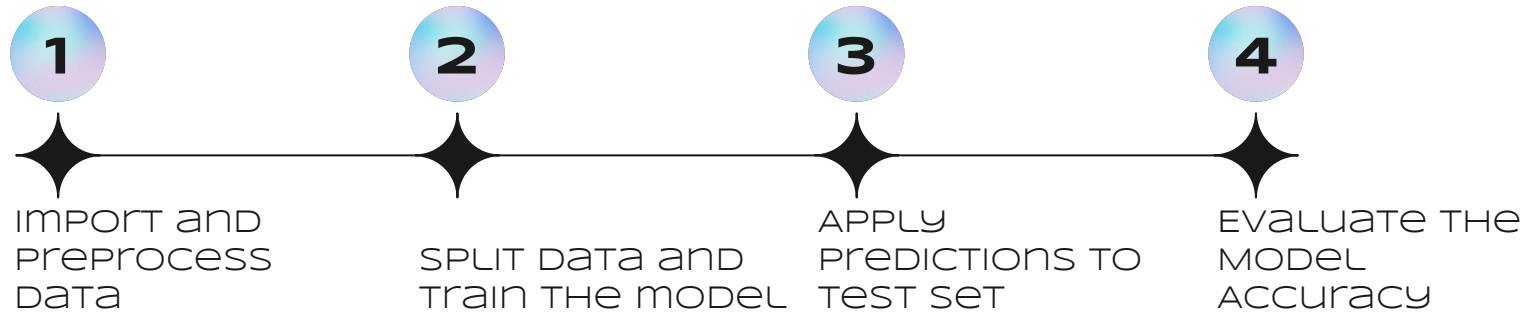




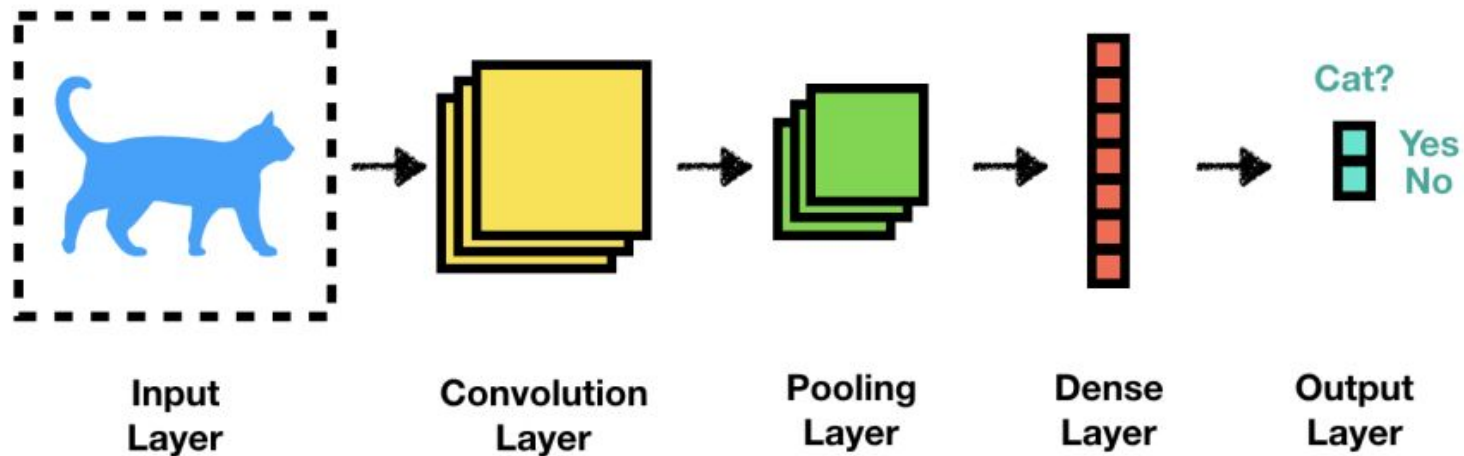
✦ 03 ✦

ANALYSIS

ANALYSIS PLAN



convolutional Neural Network



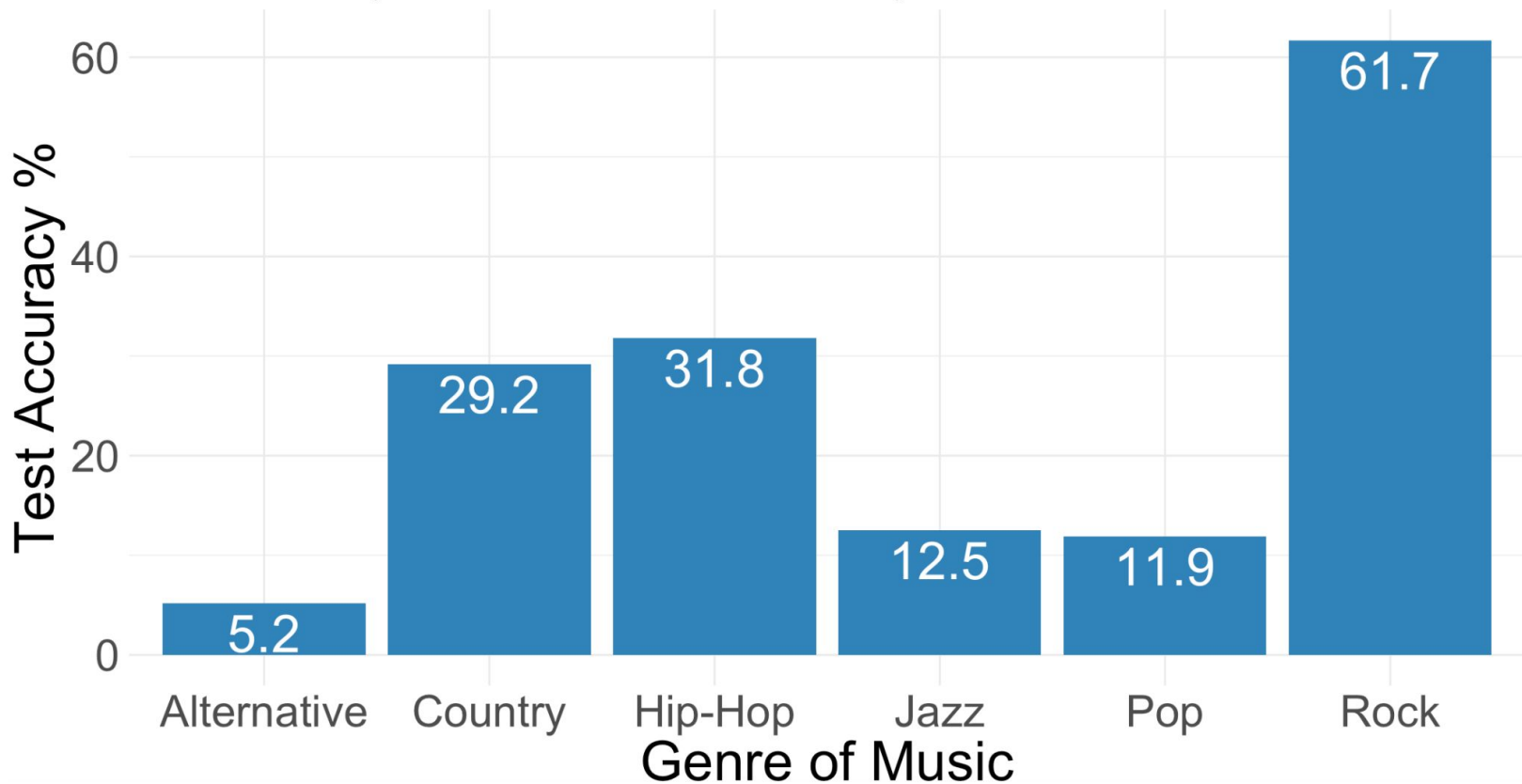


28%

Overall Accuracy of Test Data

RESULTS

Accuracy of CNN Model by Genre





04

conclusions

FINAL THOUGHTS

| | | |
|-----------|--------------|---|
| 01 | Rock | Highest Accuracy |
| 02 | Alternative | Lowest Accuracy |
| 03 | Hypothesis | Confirmed for Rock only |
| 04 | Overall | Hypothesis not met |
| 05 | Cohesiveness | Some genres may be more cohesive in album covers compared to others |

05



NeXT STEPS

WHAT CAN BE DONE IN THE FUTURE?



More Data

Increasing the amount of images per genre will allow for a more robust model (Spotify API is limited to 1000 queries per genre).



Filtering

Classifying a genre is difficult as many artists cross between genres. It could be helpful to filter the albums more thoroughly to avoid albums that fall in between genres.



Image Features

A different technique could be to do a more complex analysis of images by including other features such as contrast or saturation



Ethical Considerations

A CNN model is created with no attention to racial bias and could classify images based on skin color instead of artwork.

References

This presentation template was created by Slidesgo, and includes icons by Flaticon and infographics & images by Freepik.

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QUESTIONS?

Accuracy of CNN Model by Genre

