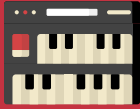




★ Album Artwork Classification

Metis Deep
Learning Project
By: Max Wood

Problem Statement



Objective

Build a neural network that can classify an album's musical genre from its album artwork

Usefulness

Record companies and artists will be able to better understand what listeners the cover of their album is targeting



Data Collection

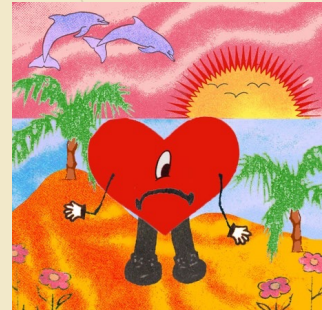
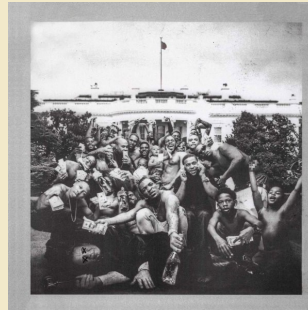
Album Genres

- Collected using billboard.py
- Used billboard's album genre charts to define album genres
- Albums collected - 8.2K :
 - Rock - 2.3 K
 - Rap - 1.2 K
 - Country - 1.2 K
 - Jazz - 1.5 K
 - Latin - 1.5 K
 - Holiday - 0.5 K



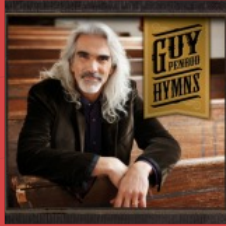
Album Artwork

- Collected Using Spotify's API and spotipy



*Albums on multiple lists were removed from all lists

Example Data (try yourself)

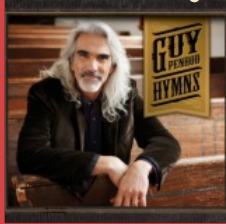


Genres:

- Rock
- Rap
- Country
- Jazz
- Holiday
- Latin

Example Data (answers)

Holiday



Latin



Jazz



Rap



Rap



Jazz



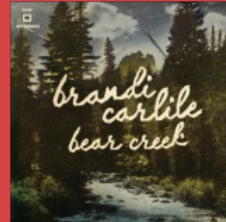
Country



Rap



Rock



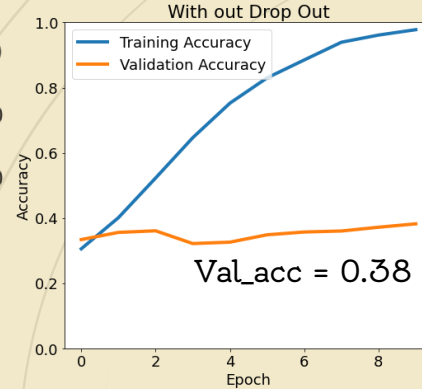
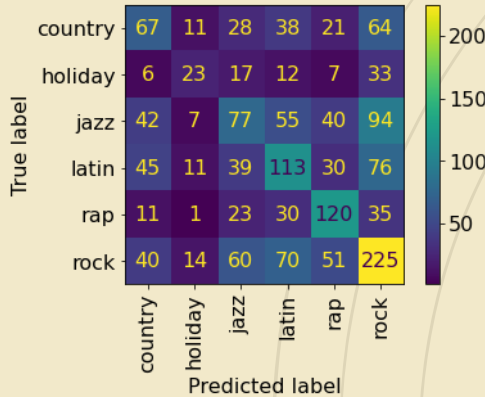
Genres:

- Rock
- Rap
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- Latin

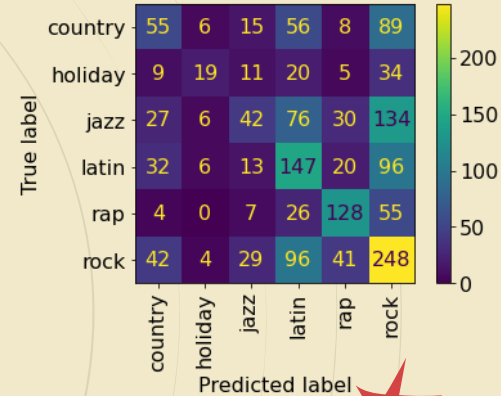
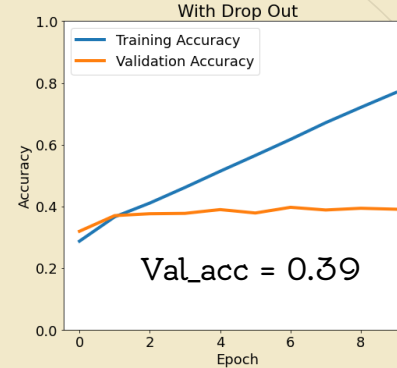
Model From Scratch

- 80/20 Training/Validation Split

CNN no Drop Out

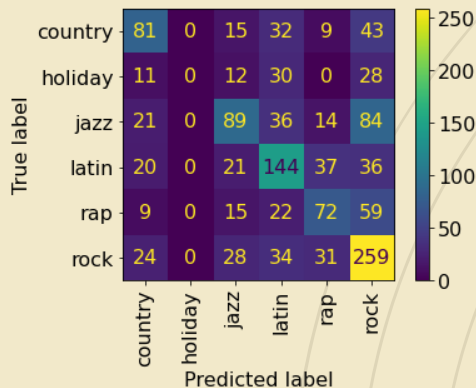


CNN with Drop Out

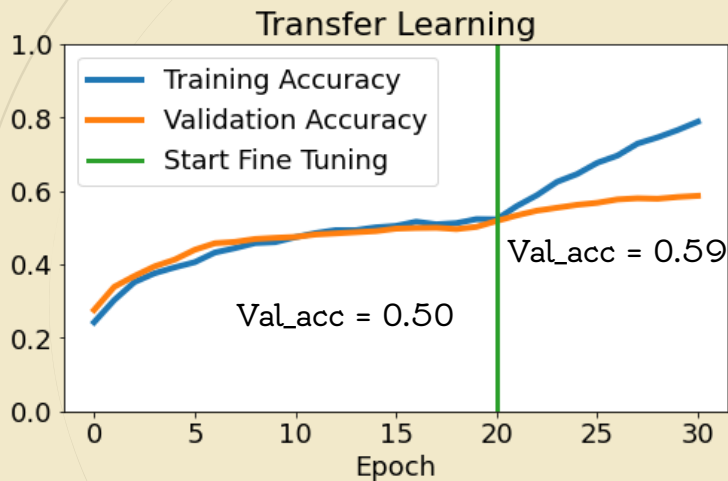


Transfer Learning

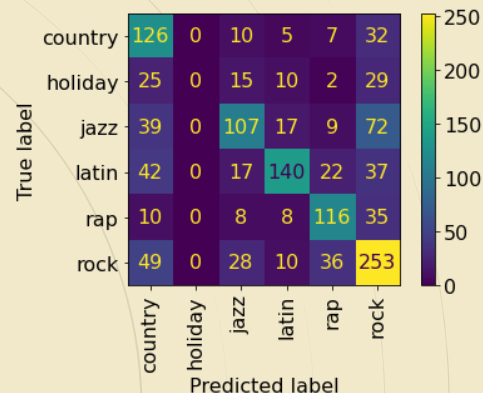
Pre Fine Tuning



- Mobile Net V2
- Initially froze the base model
- Then allowed for some Training on Full Model

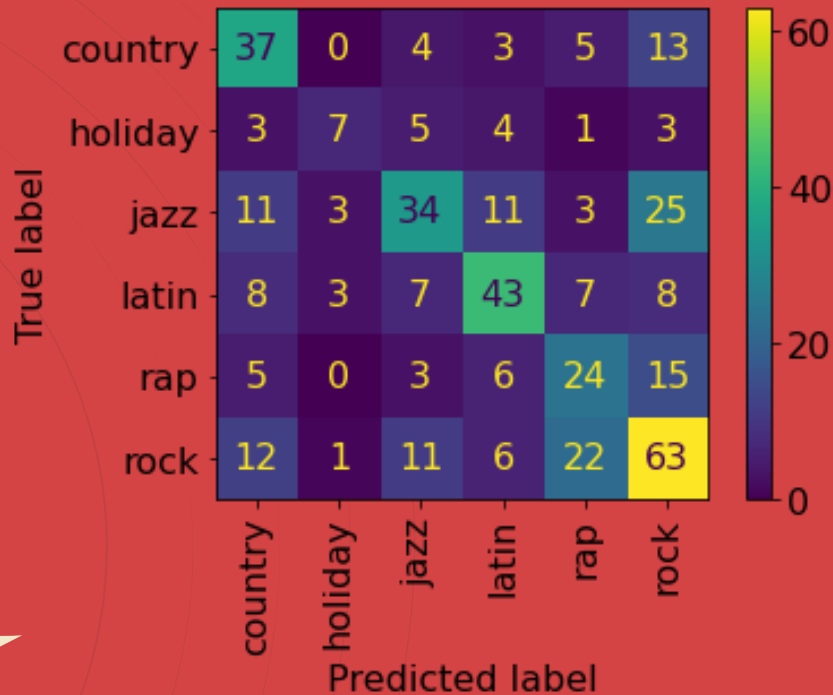


Post Fine Tuning



Score Test Data Set

Accuracy = 0.5



The background is a solid red color. It features three white five-pointed stars: one in the upper left, one in the upper right, and one in the lower center. There are also several faint, white, concentric circular lines that overlap each other, creating a ripple effect across the background.

Thanks!

