Album Artwork Classification

Metis Deep Learning Project

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Problem Statement

Objective

Build a neural network that can classify an albums 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

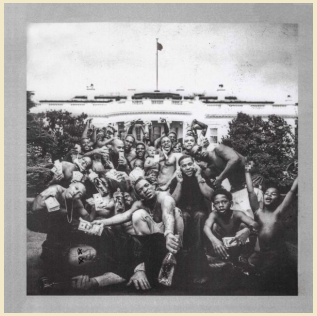
Data Collection

Album Genres billboard

- 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 Spotify

- Collected Using Spotify's API and spotipy



*Albums on multiple lists were removed from all lists

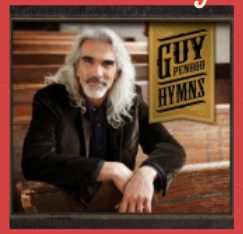
Example Data (try yourself)

Genres:

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

Example Data (answers)

Holiday



Latin

Jazz

Rap

Rap

Jazz

Country

Rap

Rock

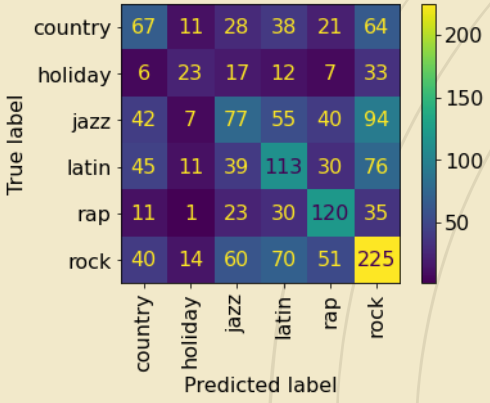
Genres:

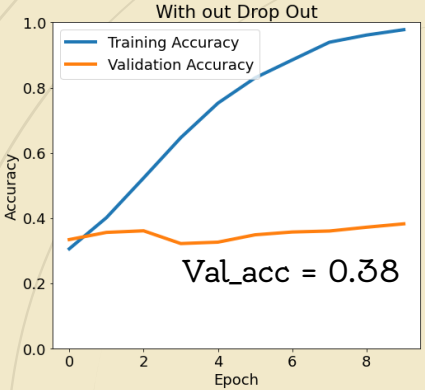
- Rock
- Rap
- Country
- Jazz
- Holiday
- Latin

Model From Scratch

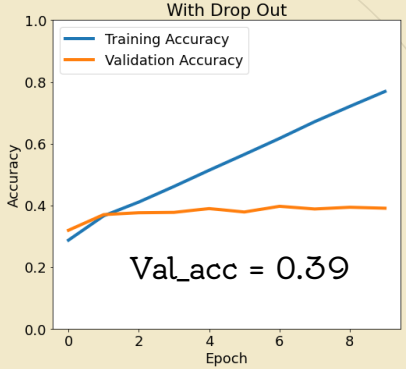
- 80/16/4 Training/ Validation/ Test Split

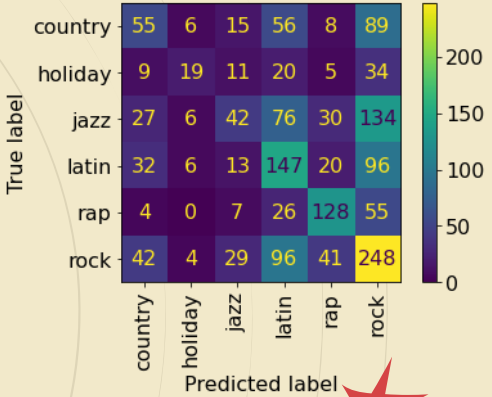
CNN no Drop Out





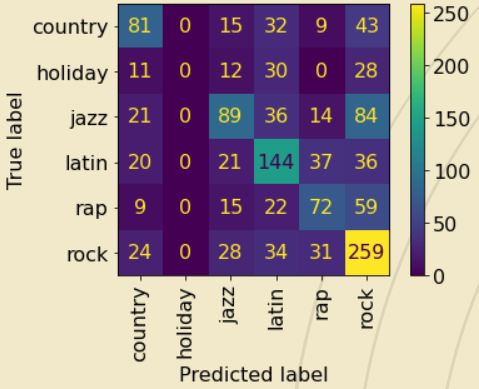
CNN with Drop Out



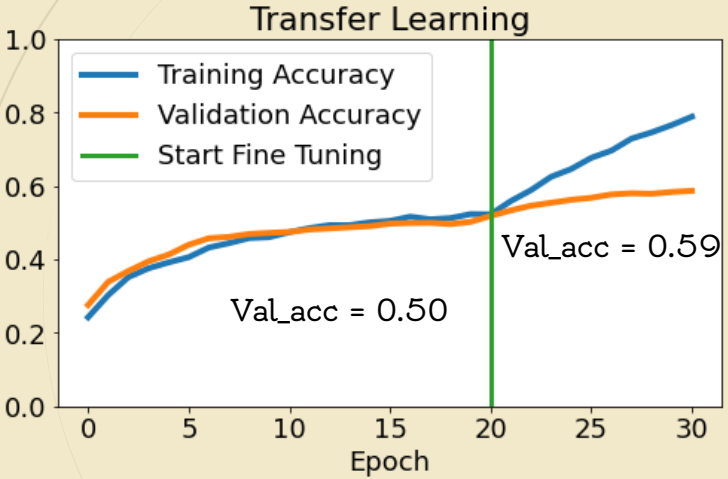


Transfer Learning

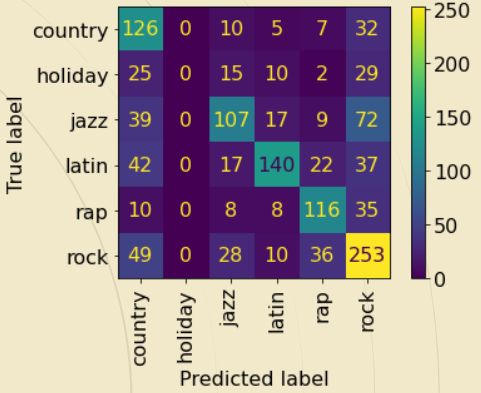
Pre Fine Tuning



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



Post Fine Tuning



Results on Test

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