AudioAI

AudioAI Workshop Project

Build an AI/ML model to detect quality control (QC) defects in Vinyl records

The goal is to detect the following audio QC metrics

- Skips
- Jumps
- Sticks
- Intrusive background noise

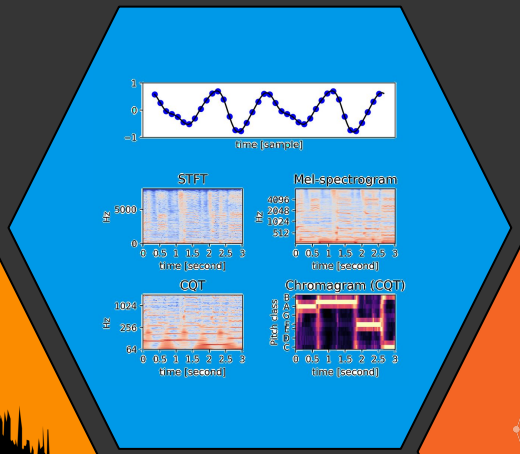
The project will produce an Open Source ML Model that can classify a Vinyl record as Pass/Fail audio QC

Project Proposal

Vinyl Record

Audio waveform

Feature Extraction



AI/ML Model

$y = f(x)$

Output

Pass

Fail

Project Unknowns

- Batch or Real-Time processing?
- Which audio features are relevant to QC metrics?
- What is the best Model Architecture?
- Binary classification output or logistic regression for each QC metric?

Project Roles

Team needed to complete the project

Domain Experts

Audio QC and mastering experts with knowledge of audio signal processing, Vinyl record pressing & Vinyl QC

Data Scientists/Analyst

Creates and maintains ML datasets, data visualization, data analysis, statistics, feature extraction & algorithms

Machine Learning Engineers

Develops and evaluates machine learning models using machine learning pipeline tool set such as Jupyter notebooks and coding in python using Tensorflow/Keras

Industry Partner

Provides industry subject matter expertise, beta testing product feedback and examples of audio QC pass/fail records to help build the project dataset