ECE 477/677 Project Proposal

**Group Members: Ethan Brown, Dylan Taves, Matthew Kolasa, Simon Kroll**

# ML Project Concept

The proposed ML project for our group is as follows: we plan to design a model that can accurately classify musical input audio to a specific genre category. We plan for this model to be run on a NVIDIA Jetson, using a microphone as the only extra peripheral other than a monitor and possibly mouse/keyboard.

# High-Level Design

Architecture

Training

# Team Roles

The group will be split into two sub teams each with general focuses:

**Team 1: Ethan Brown, Simon Kroll**

* Model Training
* Dataset allocation
* Performance analysis
* *Fine Tuning*

**Team 2: Dylan Taves, Matthew Kolasa**

* Model Development
* System Architecture
* Hardware Interfacing
* *Fine Tuning*

The group focuses were designed to have some intentional overlap with the other group’s focuses, to allow for easy collaboration and to make sure that the project is cohesive, with each module in the system is not designed without considering the rest. This is especially seen when fine tuning the model, since refining the model to achieve optimum performance will require some input from all group members. However, the division of focus between teams will allow for each team to work more deeply on specific aspects of the system, thus creating a better result when all modules are integrated with each other.