



Genre Classification Analysis

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Introduction

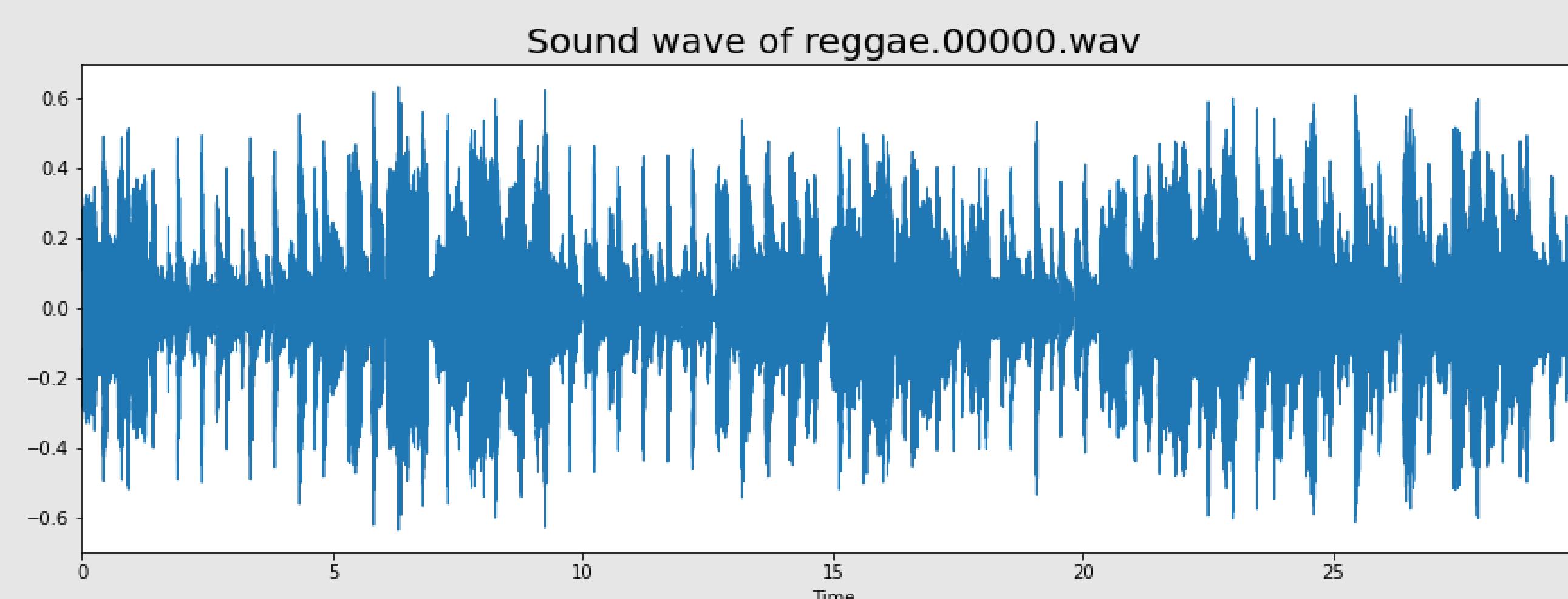
Music genre classification is an emerging field where computer scientists attempt to use artificial intelligence and machine learning to understand the unique traits/signatures of a genre in order to tell them apart from one another. In this study, we search for ways to increase our machine learning model's ability to differentiate between different genres given an audio file containing a piece of music.

Method

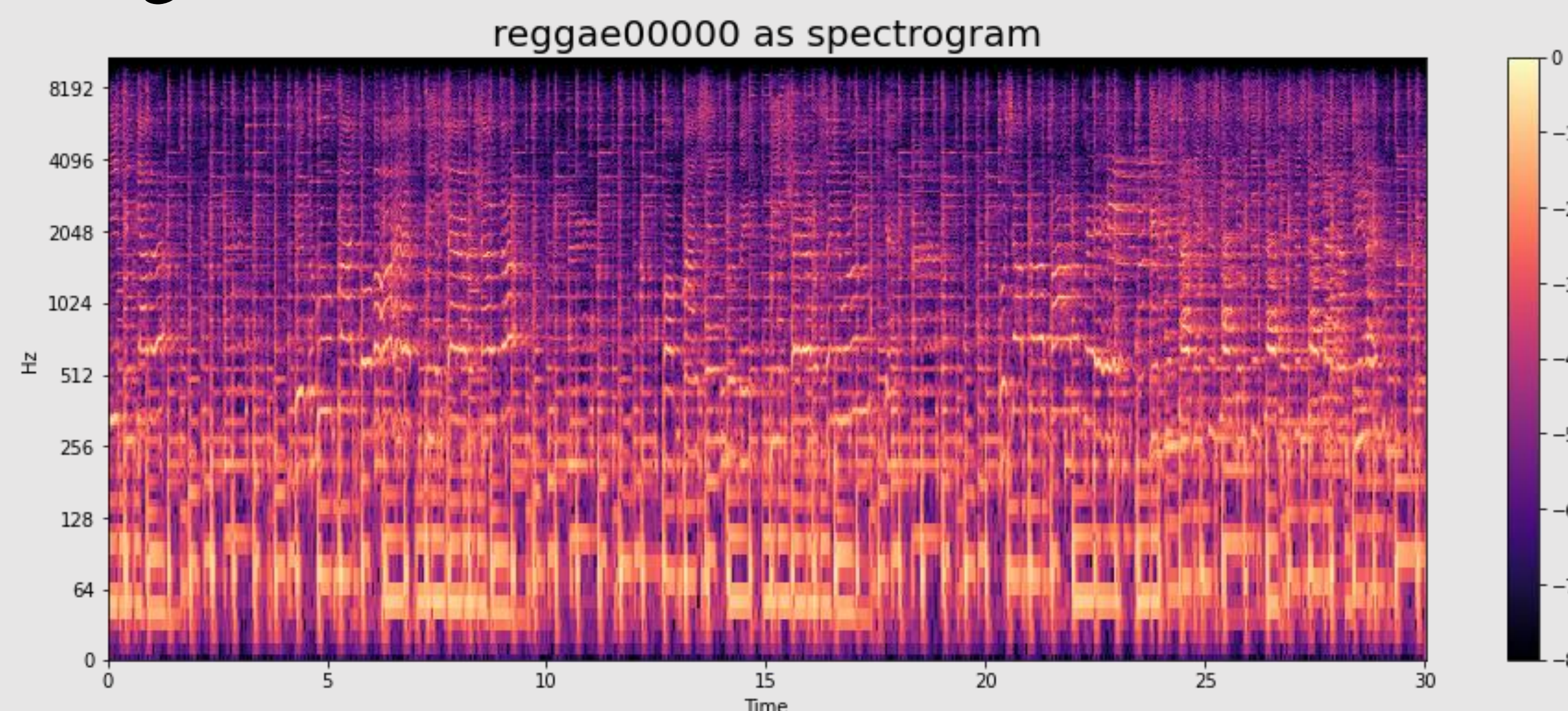
- Utilized the GTZAN dataset for training and testing
- Began with multiclass classification model: model's prediction accuracy was too low to be used in anything substantial.
- Saw greatly improved results through a switch to binary classification model.

Procedure

1. Begin with audio files in .wav format



2. Convert audio files into spectrogram images



3. Use spectrogram images to train model

4. Prediction!!!

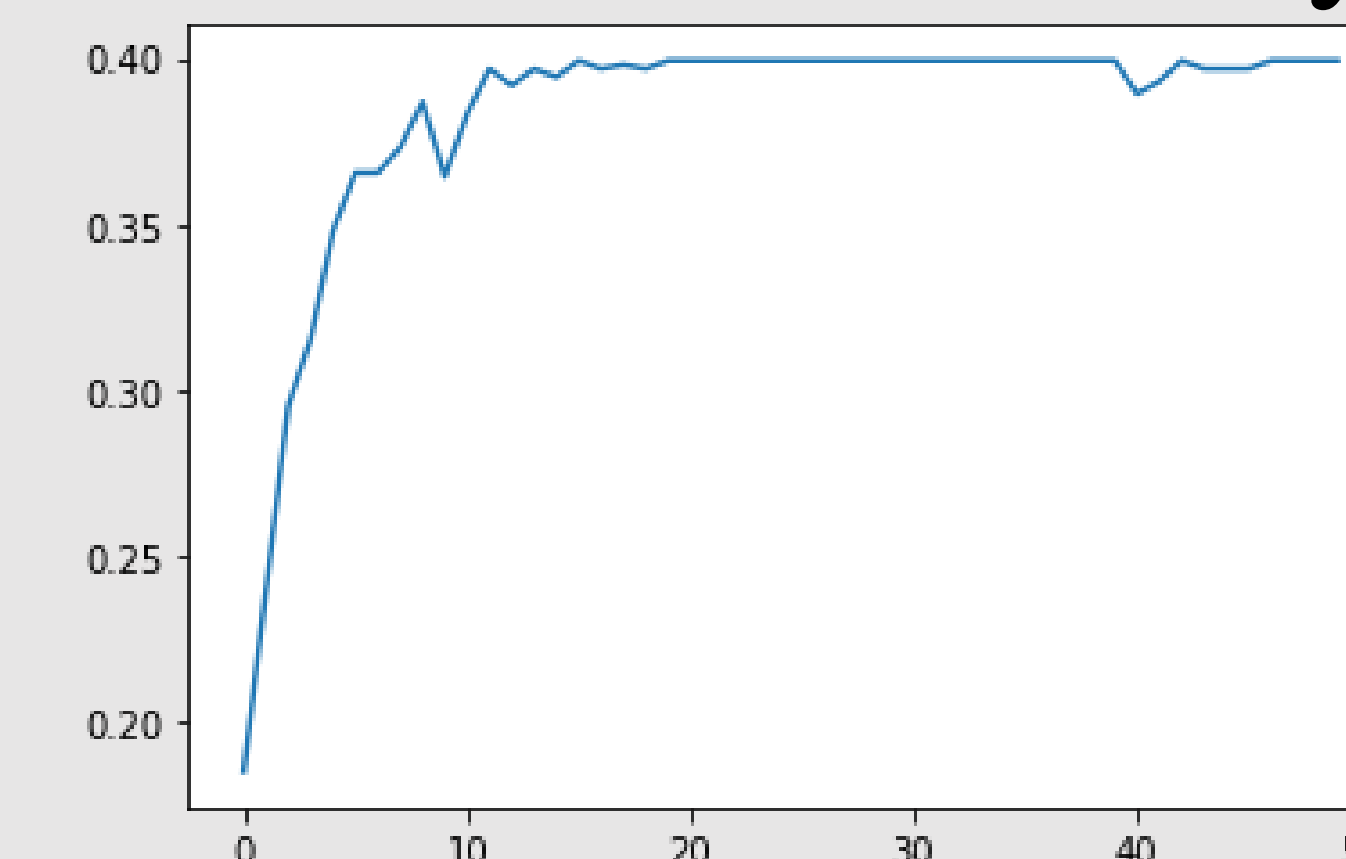
Genre =



Results

Multiclass Classification

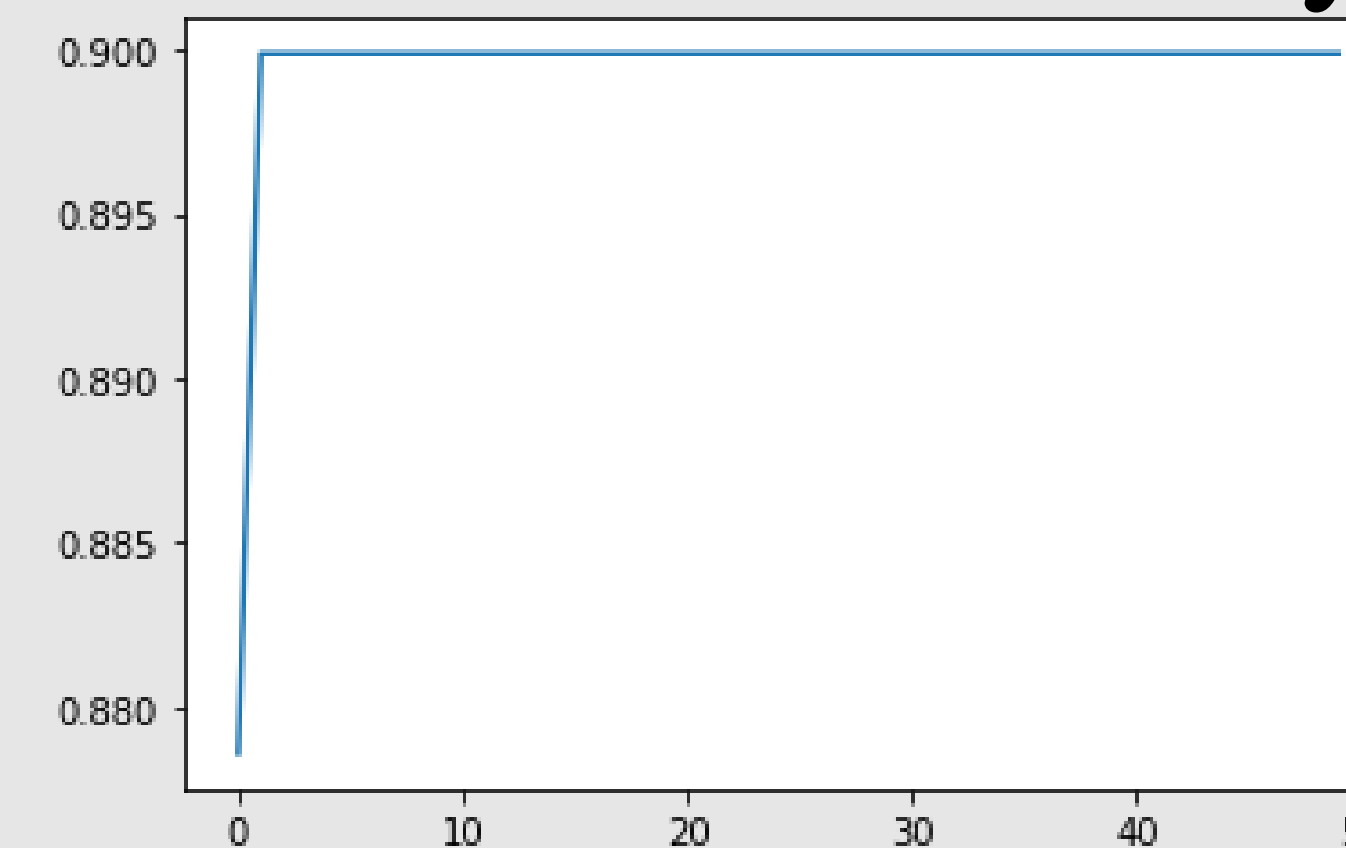
Prediction Accuracy:



Accuracy hovering around 40%

Binary Classification

Prediction Accuracy:



Accuracy increased to 90%!!

Future Work

- Create a usable interface to utilize model
- Test model on other datasets
- Attempt to increase accuracy to higher levels

Acknowledgements

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