Start

Helps to analyze these audio files and identify which areas of the forest have the greatest density of capuchin birds.

Goal

To build a Machine Learning model and code to count the number of Capuchinbird calls within a given clip

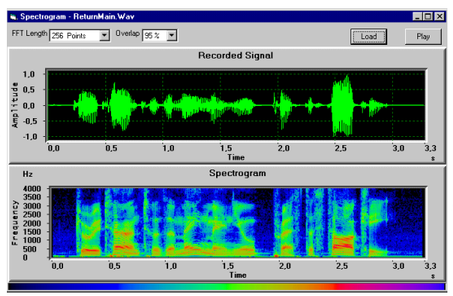
Capuchin Bird

~3s Bird Calls

Read it in using TensorFlow

Load it in Python

Read it in waveform



Convert the waveform to Spectrogram

Allows us to use Computer Vision Techniques - Convolutional Neural Networks to perform classification

Pushed into CNN (built using Tensorflow)

Output

In binary format,
1 - It is the Capuchin Bird Call
0 - It is not.

Once the model is made, we need to use it for audio clips lasting 3–4 minutes.

Slice 3–4 minute clips into 3 s segment windows, then take trained Neural Network and slide it to each segment.

Once we get classification, we need to count the number of calls, and maybe also need to aggregate consecutive calls as one.

End