Bird Call Identifier

This report provides a step-by-step guide on using the Bird Call Identifier model to get predictions from user-input sound files. This model can identify calls from three bird species: Cinereous Tinamou, Great Tinamou, and Brown Tinamu.

Prerequisites

The following are required to run the "Obtain predictions from bird call identifier model" ipynb file in the Cloud environment Google Colab.

Python packages: numpy, librosa, tensorflow, scikit-learn

Files are required to upload to the Google Colab environment

- bird_call_identifier.h5: The pre-trained model file.
- test_audio_file.mp3, the predict bird species mp3 audio file.

Steps to run the "Obtain predictions from bird call identifier model" python file

1. Assign the pre-trained "bird_call_identifier.h5" model to the "bird model" variable

```
Loading the trained model

bird_model = tf.keras.models.load_model('bird_call_identifier.h5')
```

2. Assign the need to "predict audio" file to the "predicting data" variable.

```
if __name__ == "__main__":
    predicting_data = 'XC257243_c.mp3'
    predicted_bird = predict_bird_sound(predicting_data)
    print(f'The predicted bird species is: {predicted_bird}')
```

3. Run the Python script and get the result.

```
1/1 [==============================] - 0s 28ms/step
The predicted bird species is: cinereous_tinamou
```