Report Date: 11/11/2022
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Summary

- Team Coyote2 had a meeting with ph.D Mia and Team Coyote1.
- Team Coyote2 collected and preprocessed the dataset.
- Team Coyote2 set Raspberry Pi.
- Team Coyote2 trained models using image, audio dataset.
- Team Coyote2 planned experiments.

What Coyote2 completed this week

- Team Coyote2 met with ph.D. Mia and team Coyote1.
- Team Coyote2 completed the environmental setting for Raspberry Pi.
- Team Coyote2 planned what experiments will be conducted and who will experiment with each model and feature extraction method.
- Team Coyote2 finished setting and preprocessing all Coyote[1], [2] and Non-Coyote[1], [3], [4], [5] class dataset.
- Team Coyote2 completed making a dataset including environment noise [6].
- Team Coyote2 did experiments
  - KNN with Mel-Spectrogram, MFCC
  - SVM with Mel-Spectrogram, MFCC
  - CNN(layer4) with Mel-Spectrogram(Image)

Things to do by next week

- Doing experiments with combining various models and feature extraction methods.
- Compare the feature extraction results, and fix the method which we will use.
- Making code of each experiment.
- Writing paper and script of final project beforehand.

Problems or challenges

- There was a problem with setting the Python library in Raspberry Pi because of the version of python and library.
- There were not enough dataset of foxes and wolves therefore added birds and environmental dataset.

References

[1] *Macaulay Library*, 27-Sep-2022. [Online]. Available: https://www.macaulaylibrary.org/.
[2] *J. Willard Marriott Digital Library*. [Online]. Available: https://collections.lib.utah.edu/.
[3] “Acoustic atlas: Montana State University MSU Library,” *Acoustic Atlas: Montana State University Library*. [Online]. Available: https://acousticatlas.org/index.php.
[4] “AudioSet,” *Google*. [Online]. Available: https://research.google.com/audioset/ontology/dog.html.
[5] “Birdclef 2021 - birdcall identification,” *Kaggle*. [Online]. Available: https://www.kaggle.com/c/birdclef-2021.

[6] Lasseck, Mario. "Audio-based Bird Species Identification with Deep Convolutional Neural Networks." *CLEF (working notes)* 2125 (2018).