

Report Date: 09/30/2022

To: ematson@purdue.edu, ahsmith@purdue.edu, and lee3450@purdue.edu

From: Coyote2

- Yejin Lee (20195221@hallym.ac.kr)
- Heesun Jung (20195251@hallym.ac.kr)
- Youngbin Kim (binny9904@kw.ac.kr)
- Bokyung Kwon(bbo1209@kw.ac.kr)
- Jihyeon Park (wpfflzld325@jejunu.ac.kr)

Summary

- Each team member presented the paper summary.
- Team Coyote2 studied the fundamental concepts about machine learning.
- Team Coyote2 researched previous studies and researches.
- Team Coyote2 did an elevator pitch.
- For this study, team Coyote2 set plans and drew flow charts and Gantt charts.
- Team Coyote2 started to write an abstract and introduction on paper.
- For this study, team Coyote2 had a meeting with Mia.

What Coyote2 completed this week:

- Every teammate presented a paper about audio classification. There were some topics as below.
: Acoustic scene classification using CNN [1], audio data augmentation [2], Sound event classification using cross-transfer learning [3], Open-set recognition [4], and CNN for sound classification [5].
- Team Coyote2 had a meeting with Mia. We are concerned about unfair training because the None Coyote class may contain too many species. To solve this problem, we proposed an open recognition method.
- Team Coyote2 wrote an Abstract and an Introduction. The Introduction consisted of five paragraphs. Various articles were collected to understand the trends of existing coyote detection technology.
- Team Coyote2 announced the elevator pitch on Monday. It was presented in front of all k-sw team members for about 5 minutes, and the flow of the deep learning part was explained along with the overall structure of the proposed platform.
- Created a gantt chart and flow chart for the clear design of the project.
This chart was created from a different perspective from the Team Coyote1 and shared with Mia.

Things to do by next week

- Keep revising the paper for the Middle Presentation.
- Selection of papers for next week's presentation. Bokyung Kwon, Yejin Lee, and Heesun Jung will present the paper on Monday, and Jihyeon Park, Youngbin Kim, and Griffin will present on Wednesday.
- Meeting with Mia every Wednesday, at 3 pm.
- Keep Collecting Coyote Dataset.
- Preprocessing audio data.
- Implement Python training code about Audio classification.

Problems or challenges:

- Due to the lack of related research, Team Coyote2 could not find various papers directly related to our paper topic. So team Coyote2 searched for relevant articles and web resources.

References

- [1] Valenti, Michele, et al. "DCASE 2016 Acoustic Scene Classification Using Convolutional Neural Networks." *DCASE*. 2016.
- [2] Nanni, Loris, Gianluca Maguolo, and Michelangelo Paci. "Data augmentation approaches for improving animal audio classification." *Ecological Informatics* 57 (2020): 101084.
- [3] H. Lim, M. J. Kim, and H. Kim, "Cross-acoustic transfer learning for sound event classification," in *2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, 2016, pp.2504–25
- [4] Zhou, Da-Wei, Han-Jia Ye, and De-Chuan Zhan. "Learning placeholders for open-set recognition." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*. 2021.
- [5] Piczak, Karol J. "Environmental sound classification with convolutional neural networks." *2015 IEEE 25th international workshop on machine learning for signal processing (MLSP)*. IEEE, 2015.