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Summary

The second and the third outdoor tests are done this Thursday and Wednesday. Then, the video and audio data collected are extracted and analyzed using Machine Learning and Deep Learning model.

In the next week, the data collected throughout this week will be analyzed using various methods.

What K2S3 completed this week:

- Having the second and the third outdoor tests on Thursday and Friday
    - At Mr.Smith's farm, the second and the third outdoor tests are done. Two drones, DJI Mavic 2 Pro and DJI Matrice 200 were flying in the air at the same time to collect data. The camera attached and iPhone tapped to DJI Mavic 2 Pro were used to collect video and audio data. For the data, in a total of 28 minutes, 9 different points were collected.
- Finish analyzing the data on the 29th and 30th of June was analyzed
    - The collected data was extracted by frames and analyzed using Deep Learning model, Mobilenet of CNN, and Machine Learning model. Although the accuracy of the image feature was high at 97%, the accuracy of the audio feature extracted using MFCC was quite low at 50%. So, the audio data will be analyzed again to increase the accuracy.

Things to do by next week

- The data collected throughout this week will be analyzed using various methods
    - Although the data was analyzed, as the accuracy was lower than the expectation, other methods will be also used to analyze the collected data.

Problems or challenges

- The drone used for this paper, Matrice 200, was broken.
    - When having the outdoor test, the data was collected using Matrice 200 and DJI Mavic 2 Pro. However, when landing the drone, Matrice 200 was broken. So, it is not possible to collect more data until the drone is fixed. The alternative method may be to collect with another drone again.

References

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