

Oct. 1st week (3-7)

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From: TOP GUN

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Summary

Overall, it was not enough to use the existing datasets in the ML and the DL models. We took additional photos and measured the sugar level of 50 more apples. The total data ended up to be 1200 pictures and 200 apple sugar level output. Taeyun Kim, Hanbi Kim, and Seokhyeon Heo finished the introduction of the project paper. Meanwhile, Heejun Park and Jeongho Ha started writing materials and methods. TOP GUN continued to make ML and DL models for the project.

What TOP GUN completed this week:

- TOP GUN confirmed the abstract of the project paper to Minji Lee.
- TOP GUN took additional photos and measured the sugar level of 50 more apples
- Jeffry worked on the CNN model for image classification.
- Kyung Rock gave us feedback on the introduction.
- Heejun Park and Jeongho Ha set the midterm PR.
- Hanbi Kim, Taeyun Kim, and Seokhyeon Heo set the midterm Q&A.
- ML and DL team continued to build each ML and DL model.
- Hanbi Kim, Taeyun Kim, and Seokhyeon Heo finished writing the introduction of the project paper.
- Heejun Park, Jeongho Ha wrote the materials and methods of the project paper.

Things to do by next week

- Book a meeting with Minji Lee for the paper introduction.
- Finish writing materials and methods part of the project paper.
- Continue to build Linear Regression, Random Forest ML model for the topic up to weekdays.
- Continue to build a CNN DL model for the topic.
- Prepare midterm PR and Q&A.

Problems or challenges:

- Before TOP GUN got the data on the sugar levels from 150 apples. However, it was not enough to use as datasets for the DL and the ML models. So all of the team members took additional photos and measured the sugar level of 50 more apples. The total data ended up to be 1200 pictures and 200 apple sugar level output.
- Seokhyun Heo worked on making a DL model using CNN. He struggled to preprocess his data to use on his model. Yet he is trying to finish the data preprocessing.
- Jeongho Ha worked on making a ML model using linear regression and random forest. He got low accuracy on his models. He is trying to look for a solution to get higher accuracy on his model.

References

CHU-HUI Lee, and Jhih-Chen Jhou. (2021). **A Non-Invasive Method to Classify the Sweetness Levels of Apples**. Presented at 2021 5th International Conference on Artificial Intelligence and Virtual Reality(AIVR), Kumamoto, Japan. ****

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