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From: TOP GUN

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## **Summary**

The Top Gun team is working to increase the accuracy of the model and is in the process of developing a new model. Since the mid presentation is over, we decided to focus on coding for the time being and conduct research.

## **What TOP GUN completed this week:**

- Created a collaborative environment with GitHub
- Team Topgun worked to extract various meaningful features used in machine learning and deep learning.
- The machine learning team made the classification model.
- The deep learning team achieved the implementation of the Deep Learning TabNet model and 60 percent performance.
- The deep learning team learned the model by changing the Augmentation technique on the EfficientNetB0, B1 base.
- With the application of ReduceLROnPlateau, the Learning Rate Scheduler was changed to the Ramp Up and Step Decay method, initially increasing from 1e-5 to 2 Ramp Up steps, and increasing it to 1e-4.
- Using the Step Decay method, the learning rate was reduced every two times to learn the model, resulting in 56% accuracy.
- Machine learning teams are developing new models using linear regression.
- Hanbi Kim is developing an image regression model. A preprocessing process was performed for the image regression model.
- Jeff is implementing the Tabnet model with Heejun.
- Kyung is looking for better features for prediction

## **Things to do by next week**

- Data preprocessing will be performed so that the Lab format can be used with RGB.
- The machine learning team will do hyperparameter tuning.
- The deep learning team will create a regression model.

## **Problems or challenges:**

- There is a difficulty in building an EPD V2-XL model.
- It is difficult to apply Lab color space to the machine-learning model.

- It is hard to get high-accuracy in the machine-learning model.

## References

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