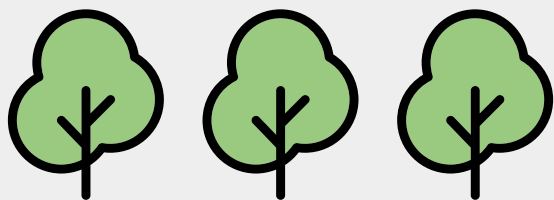


DACON

제1회 코스포 x 데이콘 자동차 충돌 분석 AI경진대회



설빙 더 아이스

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01 학습 환경

02 데이터 전처리

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01

CHAPTER 01 **ENVIRONMENT**





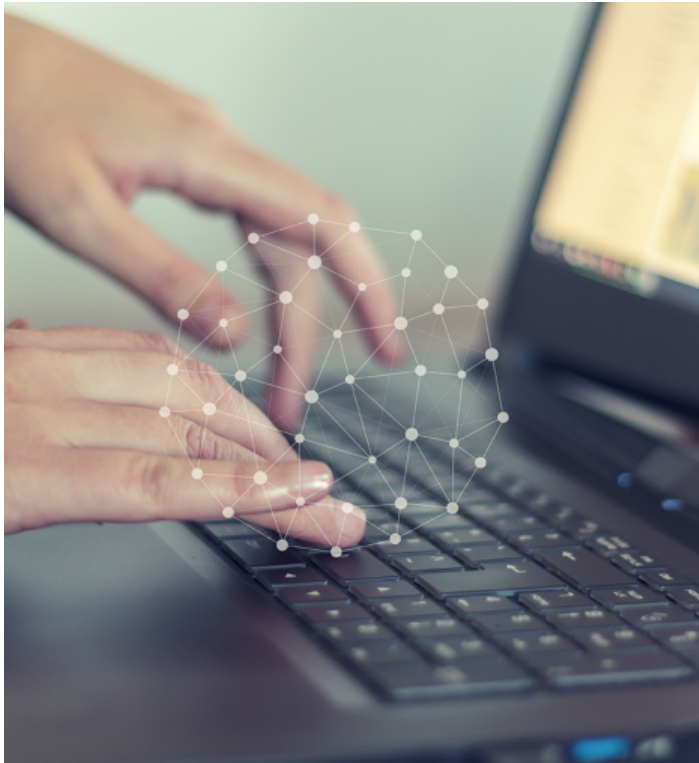
OS: Ubuntu 20.04.5 LTS (Focal Fossa)
CPU: Intel(R) Xeon(R) Gold 6240R CPU @ 2.40GHz
RAM: 755 GB (x84_64)
GPU: NVIDIA GeForce RTX 3090

CUDA 11.4
torch==1.13.1
torchvision==0.8.2+cu110
numpy==1.21.2
pandas==1.5.3
opencv-python==4.5.5.64
pytorchvideo==0.1.5
tqdm==4.62.2
conda==4.10.3
jupyterlab==2.3.2
nvidia-ml-py==11.495.46

DATA PREPROCESSING



| | EGO + CRASH | TIMING | WEAHTER |
|------------------|--------------|--------------|--------------|
| hand labeling | No | Yes | Yes |
| resize | 128 | 200 | 200 |
| normalize | Yes | Yes | Yes |
| train_test_split | 0.1 | 0.2 | 0.2 |
| Loss | CrossEntropy | CrossEntropy | CrossEntropy |



MODEL

3D ResNet 50

Overfitting

3D ResNet 18

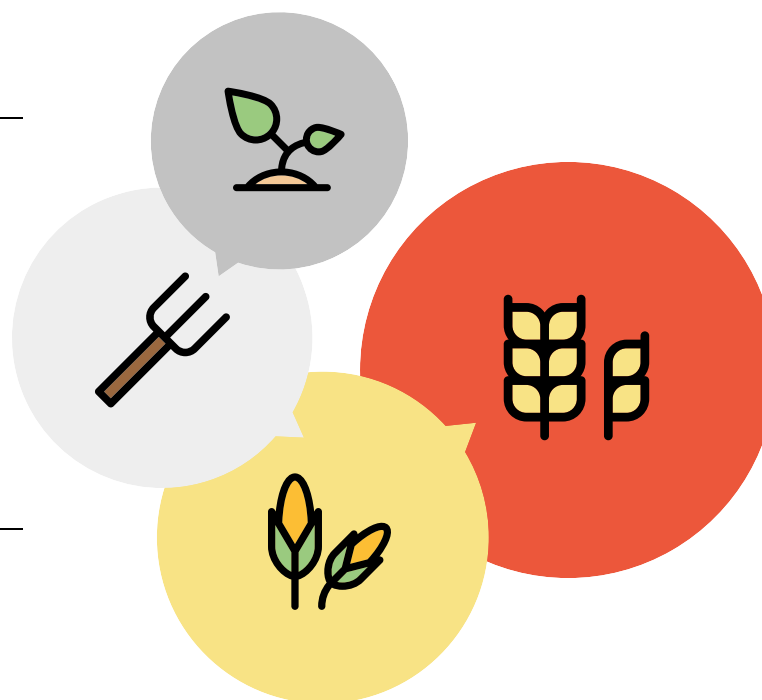
Good

SVM Classifier

Not good

NN Classifier

Good



NN Classifier

Linear

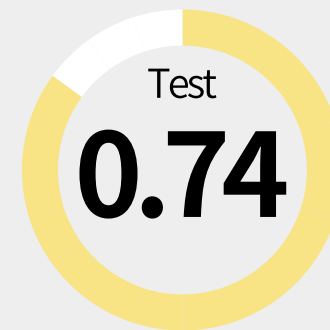
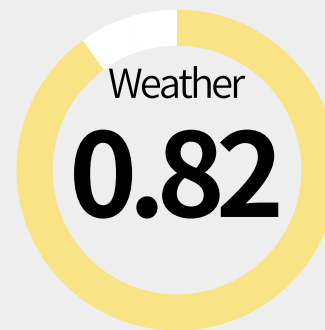
512 -> 400
No activation function
No dropout

Linear

400 -> 256
ReLU
dropout = 0.5

Linear

256 -> 2



F1 Score (Macro)

Thank you

설빙 더 아이스

