

PROJECT

Develop deep learning detection model of dataset created in the assignment. Experimental work for model performance.

Project Instruction detail

1. Develop a CNN model and Transfer learning model for your fruit/vegetable/flower recognition project. This model will lead to paper. Each group has to submit two papers. So each group will be divided into two teams. E.g.: Your group dataset is rambutan freshness dataset. Your paper title can be (i) Rambutan freshness recognition system using transfer learning. and (ii) Best grade rambutan recognition system using transfer learning.
2. CNN model- Create one CNN model. Create your own architecture. The size of your model roughly say just 4 – 6 convolutional and 2 - 3 classification layers. Train your model with your dataset.
3. Pretrained model – please pick 3 existing models. Such as VGG16, Inception and Alexnet or else. Train your model with your dataset.
4. Do fine-tuning to all your models. Use different configuration such as various epoch, optimizer, and etc, to get best accuracy to all models you have created in item 2 and 3 above.
5. Once complete, write report. The report is a paper publication format. See list of sample papers below for you to follow in writing report.
6. Two papers per group. Submit two version: Pdf and MS-Word.

Project Grading Rubrics

Title (5%)

Abstract (5%)

Introduction (10%)

Related Work (5%)

Proposed work

- Dataset preprocessing (10%)
- CNN model (10%)
- Pretrained model (30%)

Experimental (20%)

Conclusion and References (5%)