

Image data:

- [Tomato Leaf Diseases Detect Dataset > Overview \(roboflow.com\)](https://roboflow.com/datasets/tomato-leaf-diseases-detect-dataset)
- Number of training data: 92 (31 test images, 61 validation images)
- Classes
  - 0: Bacterial Spot
  - 1: Early\_Blight
  - 2: Healthy
  - 3: Late\_blight
  - 4: Leaf Mold
  - 5: Target\_Spot
  - 6: black spot

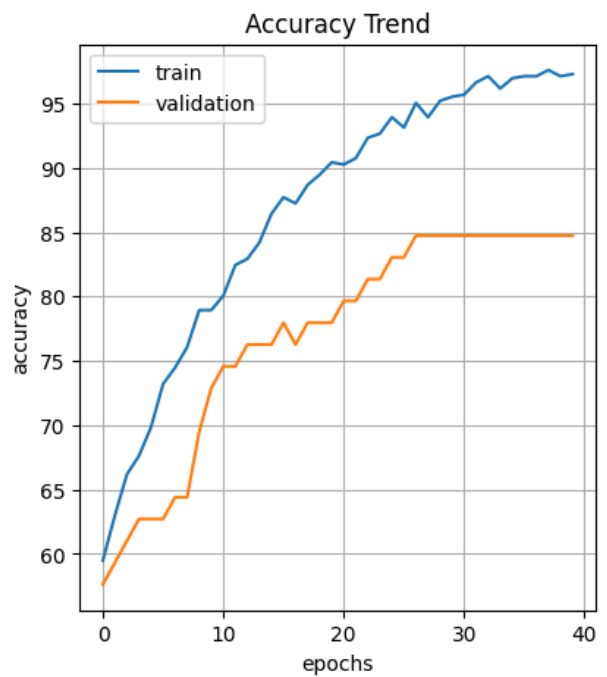
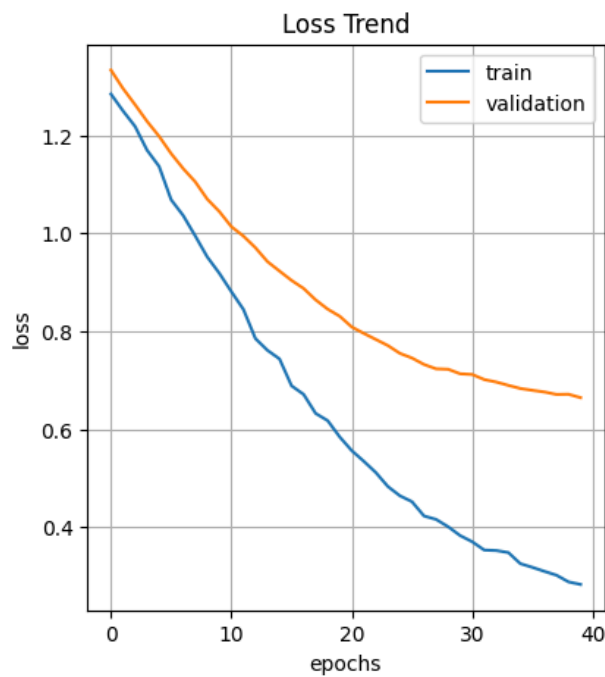


Deep learning model:

- The visionTransformer ([VisionTransformer — Torchvision 0.19 documentation \(pytorch.org\)](https://pytorch.org/docs/stable/torchvision/models/vision_transformer.html))
- Used pretrained weights ([vit\\_b\\_16 — Torchvision 0.19 documentation \(pytorch.org\)](https://pytorch.org/docs/stable/torchvision/models/vision_transformer.html))
- Modified header of model to classify 7 types of disease.
- Used Google colab with T4 GPU.
- With 40 epochs, it took 21 minutes to train.

Result:

- 97.29% training accuracy and 84.75 validation accuracy.



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label:Healthy  
pred:Healthy



label:Healthy  
pred:Healthy



label:Early\_Blight  
pred:Early\_Blight



label:Early\_Blight  
pred:Early\_Blight



label:Early\_Blight  
pred:Early\_Blight



label:Healthy  
pred:Healthy



label:Healthy  
pred:Healthy



label:Healthy  
pred:Healthy



label:Early\_Blight  
pred:Early\_Blight



label:Bacterial Spot  
pred:black spot



label:Healthy  
pred:Healthy



label:Early\_Blight  
pred:Early\_Blight



label:Early\_Blight  
pred:Early\_Blight



label:Late\_blight  
pred:Late\_blight



label:Early\_Blight  
pred:Early\_Blight



label:Healthy  
pred:Early\_Blight

