**Tema:** Detectie fructe bolnave pentru aplicarea unui tratament rapid

**Articol 1:** <https://www.sciencedirect.com/science/article/pii/S2666285X22000218>

Set de date: <https://www.kaggle.com/datasets/emmarex/plantdisease>

* Descriere: Setul de date contine imagini cu frunze de ardei, cartof, rosii care prezinta anumite boli
* Disponibilitate: public
* Tipuri date: imagini

Algorimti folositi: CNN (75 epochs using a batch size of 32), Adam optimizer (categorical cross-entropy), data augmentation (rotating the images to 25 degrees, flipping and shifting of images horizontally and vertically)

Metrici calculate: acuratete

Rezultate obtinute: 96.5% accuracy

**Articol 2: https://www.frontiersin.org/journals/plant-science/articles/10.3389/fpls.2022.927424/full**

* Set de date: Apple Leaf Disease Object Detection dataset (ALDOD), that contains 8,838 images
* Descriere: Setul contine imagini
  + Disponibilitate: privat, dar cules din surse publice (Apple leaf disease images in our dataset were collected from the public datasets Plant Pathology 2021-FGVC8 and Plant Pathology 2020-FGVC7 on Kaggle)
  + Tipuri de date: imagini

Algoritmi folositi: YOLOv5 (a modified version, called MGA-YOLO); SGD with *dynamic learning rate to accelerate the model convergence and maintain training stability. The initial learning rate (lr0) was set to 0.01, and the final OneCycleLR learning rate (lrf ) was set to 0.2 to update the learning rate of each epoch.*

Metrici calculate: mAP (with IoU threshold), AP\_50

Rezultate obtinute: mAP – 89.3; AP\_50=94.8%