

Task 2

By: Ahmed Sharaf

Topics Covered :

- Train YOLO on Custom Data
- Train YOLO on One Object and Test on Multi-Object

Main Objective :

- The goal is to see if we can teach a YOLO model to look at a picture of one apple. Then, when we show it another picture with both good apples and a bad one, it will know how to find the bad apple among the good ones or not.
- Here's the download link for the data: ([click here](#)).
- **Note:** I modified this dataset, so the number of training images is small. I'm not aiming for high accuracy, just to get an idea of the topic and see if it's possible to train the model this way or not.

Resources:

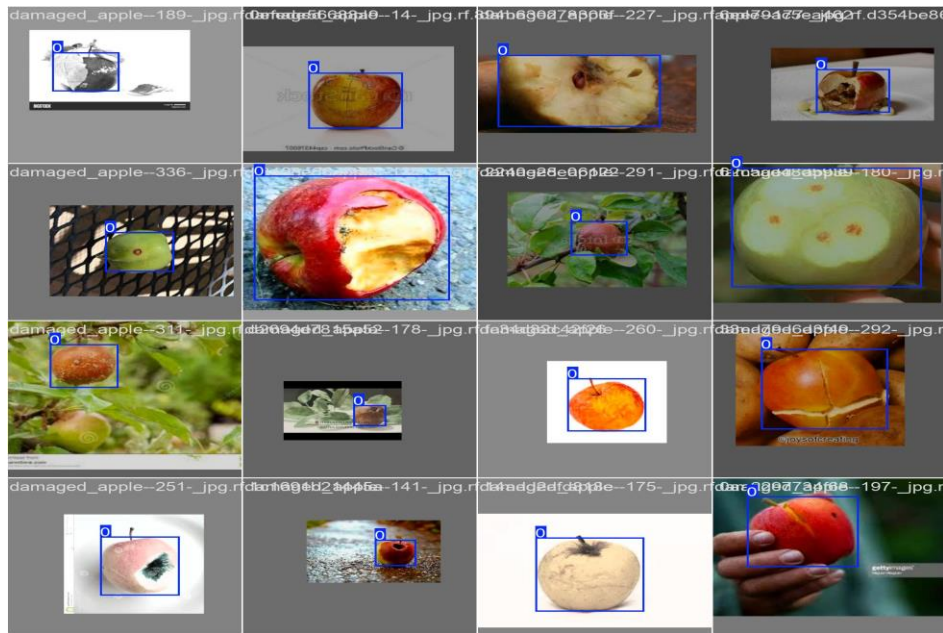
- Custom Object Detection by YOLO And Annotated By Roboflow
- Train YOLOv8.1 on custom data
- How to Train for Object Detection on a Custom Dataset
 - Tutorial Notebook
 - If need to unzip file in Colab use this code -> `!unzip 'path'`
 - Some Error Will Occur Handle It (Google It), let me know if you get stuck.

Additional Resources If you need to deep understand YOLO Model (Optional)

- How YOLO algorithm work (part one)
- How YOLO algorithm work (part two)
- How YOLO algorithm work (part three)
- YOLO [mean average precision] mAP

Sample Result :

Training :



Testing :



Don't worry about accuracy; just take a look and understand the concept.