Convolutional Neural Networks:

Object Detection

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Object Detection

- Object Detection is a type of Deep Learning, which
  - detects locations of objects in an image
  - highlights the area with a rectangle
- Many different algorithms
  - Fast R-CNN
  - Faster R-CNN
  - YOLO (You only look once)
  - SSD (Single Shot Detector)

- Typically, custom training setup cumbersome to setup and time-consuming training
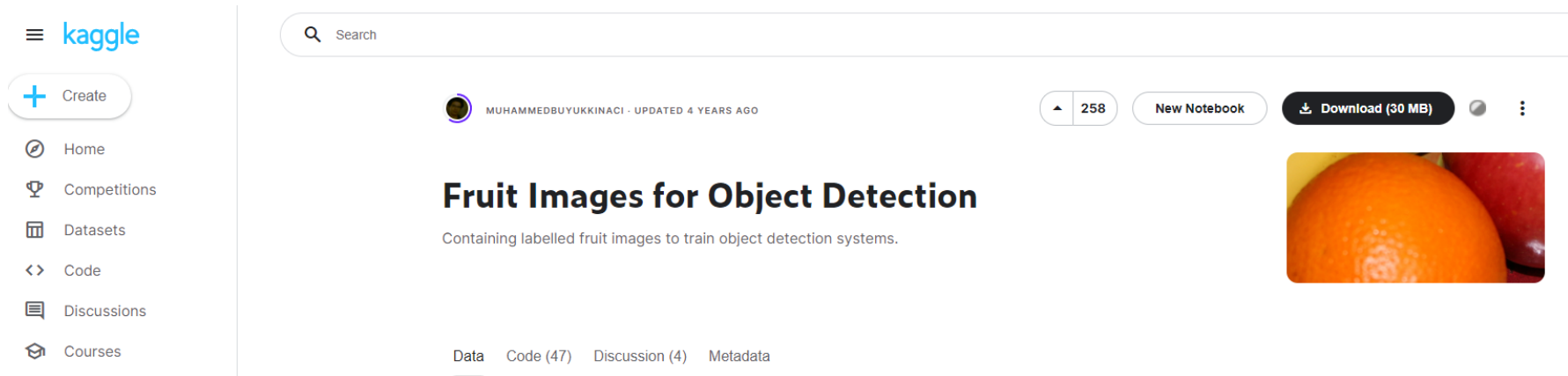
Object Detection

- "detecto"
  - Python package
  - based on PyTorch
  - Claims to "build fully-functioning computer vision and object detection model with jus 5 lines" (well, close to)
  - Relies on [Faster R-CNN ResNet-50 FPN](#)

Object Detection

- Simplified dataset with labels and bounding boxes: "apples", "bananas"

Source: https://www.kaggle.com/datasets/mbkinaci/fruit-images-for-object-detection

Object Detection

- Result after 20 epochs