My Youtube Video Link- https://www.youtube.com/watch?v=KzrDyJSBPwA

YOLOv8- https://colab.research.google.com/drive/1SzoHW6cmcdEFi7QdqSMWuT5FnyCHwaP\_?usp=sharing

Enhanced YOLOv8- https://colab.research.google.com/drive/1ahYJ34PEMo-rBU4qBOnsiPtmnN9-htrj?usp=sharing

Detectron2- https://colab.research.google.com/drive/1gEXkGHBDBzUU2KCeVhg--B-o2wmsL5XW?usp=sharing

Transformers(DETR) https://colab.research.google.com/drive/1FiGqzhtX0KXDOwqrx0upm9ddQvn2WCGb?usp=sharing

YOLOv9-https://colab.research.google.com/drive/1wJMb5mGfwlcCoAeOyenfXY66MPeXew42?usp=sharing

Setting up VIRTUAL ENV-

py -m venv env

env\scripts\activate

FOR FLASK APP-

pip install ultralytics==8.1.24

pip install flask==3.0.2

pip install tensorflow

FOR V8 DESKTOP RUN-

OPEN V-ENV

MAKE SURE, YOURE IN YOUR DOWNLOADS/v8YOLO\_code(ROOT DIRECTORY)-

for dataset path error-> OPEN -> C:\Users\chint\AppData\Roaming\Ultralytics\settings.yml -> and reset datasets\_dir to "C:\Users\{YOUR\_USER\_NAME}\Downloads\v8YOLO\_code"

BELOW ARE THE PACKAGES WHICH YOU MIGHT NOT HAVE BY DEFAULT, ALSO PLEASE INSTALL BASIC DEPEDENCIES LIKE PANDAS, NUMPY.

pip install ultralytics==8.1.24

pip install flask==3.0.2

pip install tensorflow

pip install tensorboard

python v8.py

FOR YOLOV8 (Reguar/Enhanced) Results-

1. Please run the gui.py wherein you can visualize the results.
2. Path – (v8YOLO\_code\obtained\_runs (or) v8YOLO\_code\enhanced\_runs
3. You can also refer to colab links above.

REG PREDCITOIN V8- Does not detect all the objects, its faster, but has more loss per class.

A screenshot of a computer

Description automatically generated

ENHANCED PREDICTOIN- Takes a little more time but predicts almost all the class labels with more accuracy and mitigated class loss.

A screenshot of a computer

Description automatically generated

Detectron2 Inference- A screenshot of a computer

Description automatically generated

DETR Transformer Inference-

A screenshot of a computer

Description automatically generated

YOLOv9 Result-

A graph of a graph of a graph

Description automatically generated with medium confidence