Open the Project:

Open PyCharm and open your project by selecting the project folder.

Configure Virtual Environment:

It's a good practice to use a virtual environment to manage dependencies for your project. In PyCharm, you can configure a virtual environment as follows:

Go to File > Settings > Project: <ProjectName > > Python Interpreter.

Click the gear icon and select Add... to create a new virtual environment.

Choose the base interpreter (usually the latest Python version installed on your system) and specify the location for the virtual environment.

Install Dependencies:

Install the required dependencies (Ultralytics and OpenCV) using PyCharm's terminal:

* Nvidia Cuda from here https://developer.nvidia.com/cuda-downloads?target\_os=Windows&target\_arch=x86\_64&target\_version=10
* pip3 install torch torchvision torchaudio --index-url https://download.pytorch.org/whl/cu121
* pip install ultralytics opencv-python

Download YOLO Model Weights:

Download the YOLO model weights (best.pt) from the Ultralytics YOLO repository.

Run the Application from PyCharm:

Open the Python script (uavtracking.py) in PyCharm.

Right-click anywhere in the script editor and select Run ‘Current File’.

As the application runs, it captures frames from the camera, performs object tracking using YOLO, and displays the processed frames with bounding boxes around detected objects.

Termination:

To stop the application, click on the PyCharm console and press stop icon until window closes. If you are running from the command line, you can press Ctrl + C in the terminal.