

1 Project 1 : Object Detection + 5G + Heavy Drone

In this exciting project, we aim to create a cutting-edge smart drone system that leverages the power of 5G technology, Raspberry Pi, object detection, and Kubernetes to enable real-time decision-making. By seamlessly integrating these components, we will construct a drone capable of streaming live video, processing it for object detection, and making informed decisions based on the analyzed data.

2 Current status

Presently we have used Teltonika RUTX50 5G router for the 5G connectivity. We have also used Raspberry Pi 4 for the processing of the data. We have used the YOLOv5 algorithm for the object detection. We have also used Kubernetes for the orchestration of the containers.

3 Impact with national prominence

4 Images of the product being developed



Figure 1: Teltonika RUTX50 5G Router and Raspberry Pi 4

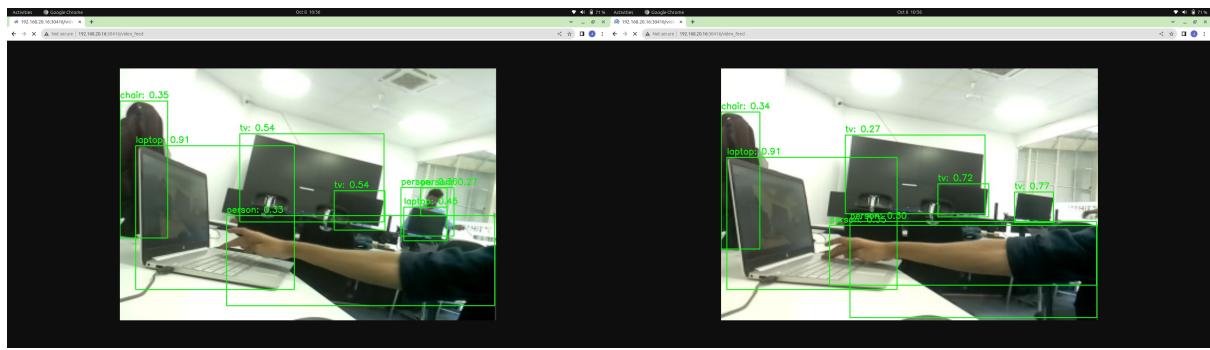


Figure 2: object detection from Raspberry 4 camera

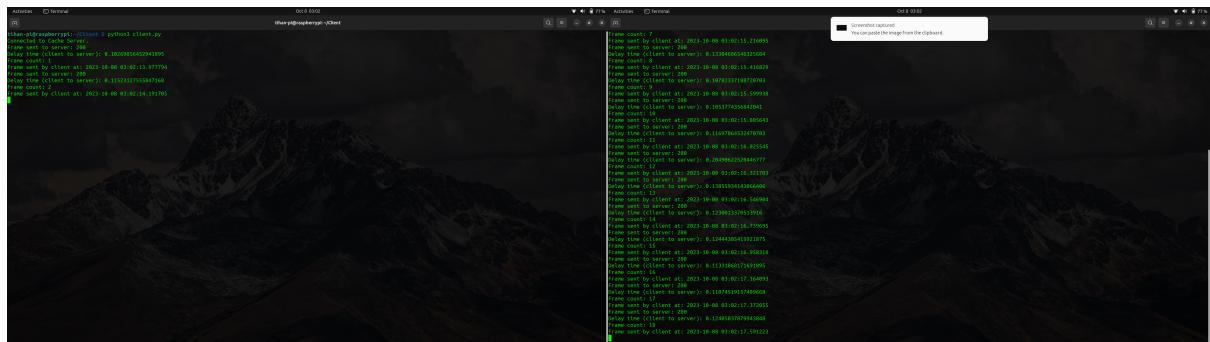
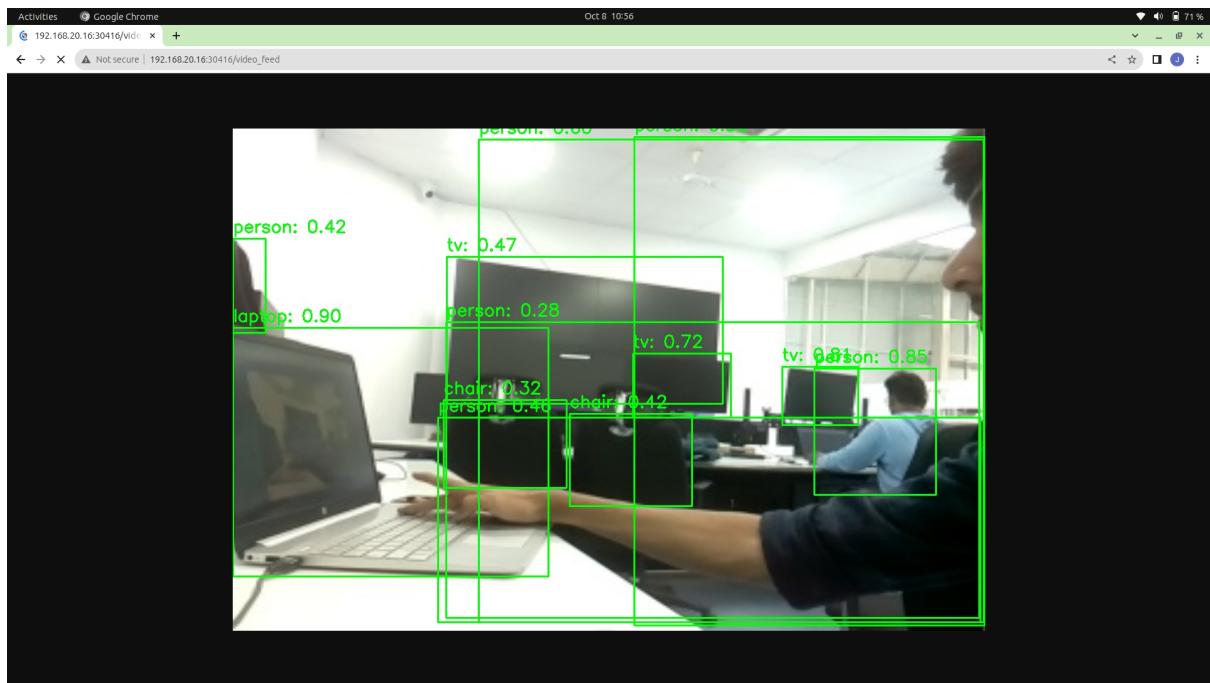


Figure 3: Throughput and latency report