

Current project

- Aerial vision for ground troops using consumer hardware
- DJI Mavic Air 2s - \$700
- DJI Mavic Advanced Industrial - *portable aerial thermo imaging solution* \$6000
- MS Hololens 2 mounted on the helmet - *could be replaced by smartphone client in majority of situation* \$3000

Roadmap

1. Oracle

A. iPhone Ground Station app

- I. connects to DJI remote over DJI SDK
- II. Connects to system's server
- III. Broadcasts repacked video from drone via 4G connection
- IV. Pilots drone according to the instruction from the server

B. iPhone/Hololens 2 Fighter app and a webpage

- I. Displays received from broadcast Video from camera of drone
- II. Displays GPS coordinates of Drone and of the Fighter

C. System's server

- I. Supporting multiple concurrent connections of the iPhone Ground Station apps
- II. Efficiently and scalable records multiple drone camera streams

D. Hololens/Helmet mount 3d print

2. Raven

A. iPhone Ground Station app

B. iPhone/Hololens 2 Fighter app

- I. Shows GPS markers of recognized targets received from the System's server

C. System's server

- I. CV/DeepML (trained YOLO model) for recognition of humans, vehicles in aerial footage
- II. Tracking of targets

3. Tempest

1. On-board 4G/Starlink connectivity for DJI Mavic
2. Custom firmware for DJI Mavic
3. System's Server on Matrice 300 RTK

1. Direct control of DJI Mavic's