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EYE IN THE 'SKY'

WHAT DOES IT DO?

This project utilizes computer vision algorithms to track objects, then attempts to follow that object. It also broadcasts live video to a smart phone!

WHY DID WE WANT TO DO IT?

Since the department only recently purchased these drones, none of us have flown these drones before. We decided that it would be worthwhile to make it fly itself.

HOW DOES IT WORK?

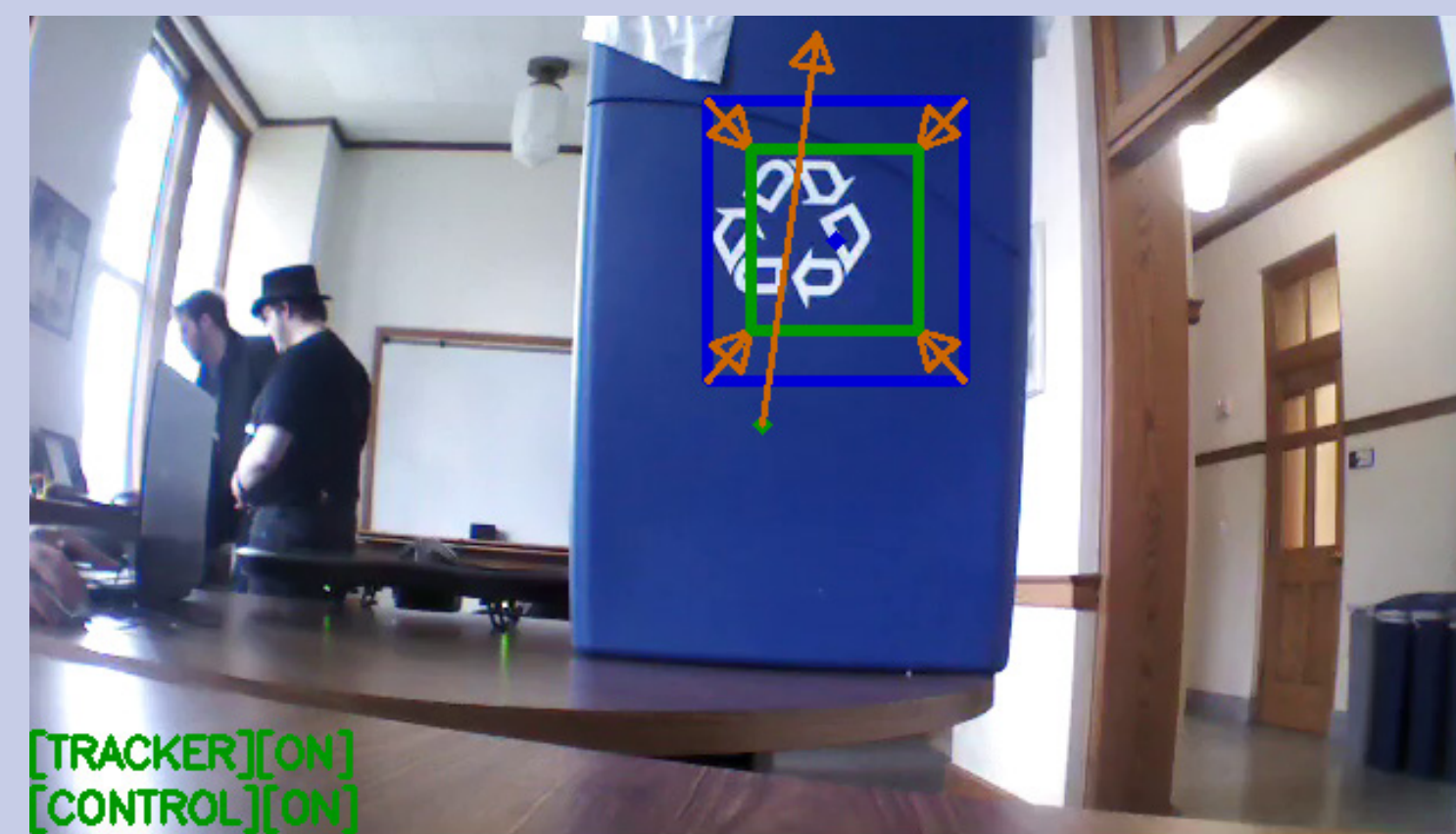


cvg_ardrone_ibvs

Short for Image Based Vision Servoing and written by the Computer Vision Group, this package lets us pick an object for the drone to track. The drone then follows that object to the best of its ability.

Object Recognition

For the drone to follow something, it first needs to know what to follow. The user draws a box around desired object, the drone then tries to find that 'snapshot' in each frame of the video feed.



Drone's-Eye View

The green box indicates where the drone thinks the object is (for now, it's right).

LIVE FROM THE OC

Autopilot

Once the drone is tracking the object, we turn control over to the IBVS software. The software moves the drone until the object is in the center of its vision. If it loses the object, it will hover in place.