

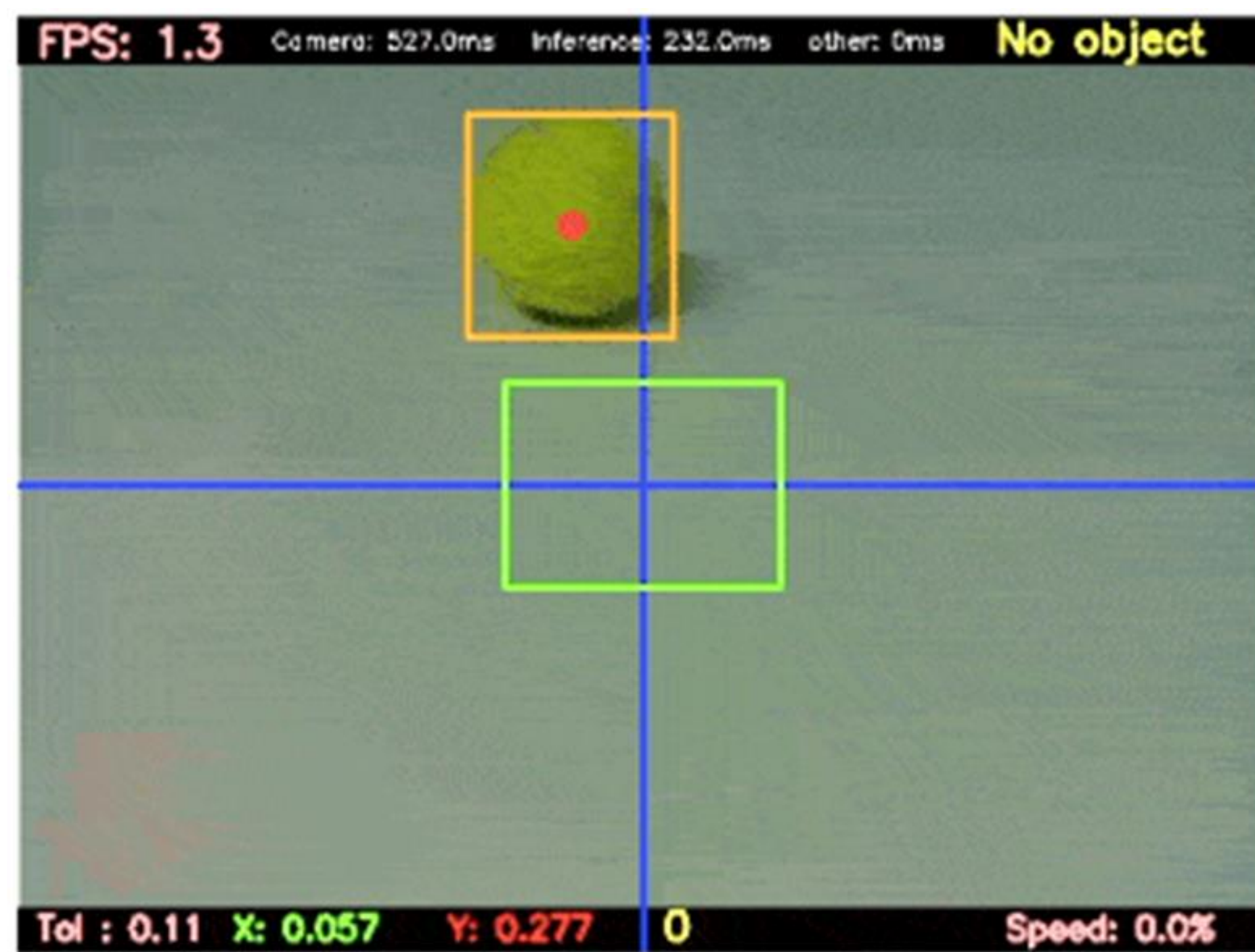
# Tennis Ball Robot

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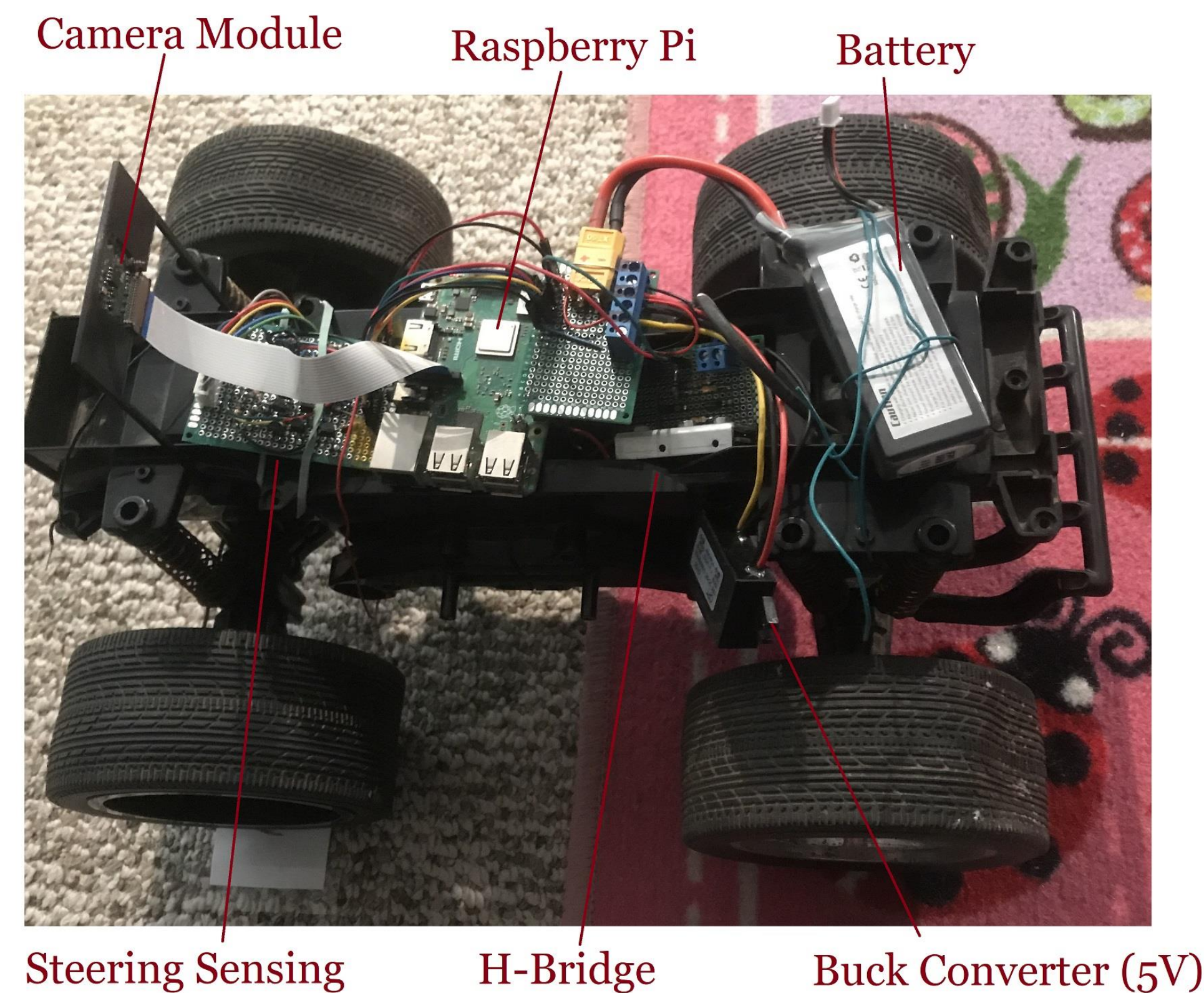
## Background

Our goal is to design a Robot that detects tennis balls and travels to it. To accomplish this goal, we implemented an object tracking algorithm using a computer and camera hooked up onto a RC car.

When the Robot detects a tennis ball, it will locate the location and travel to it.



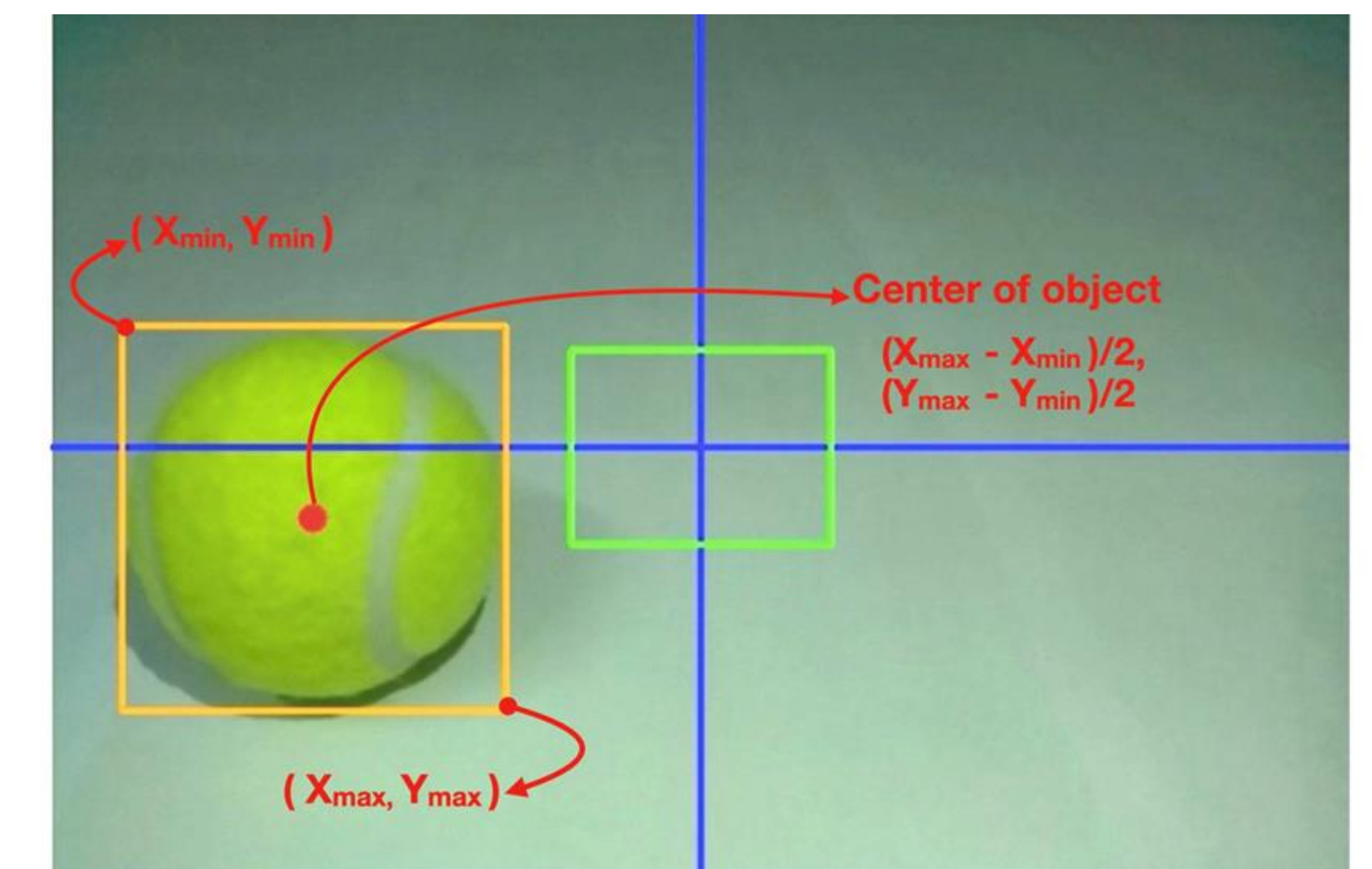
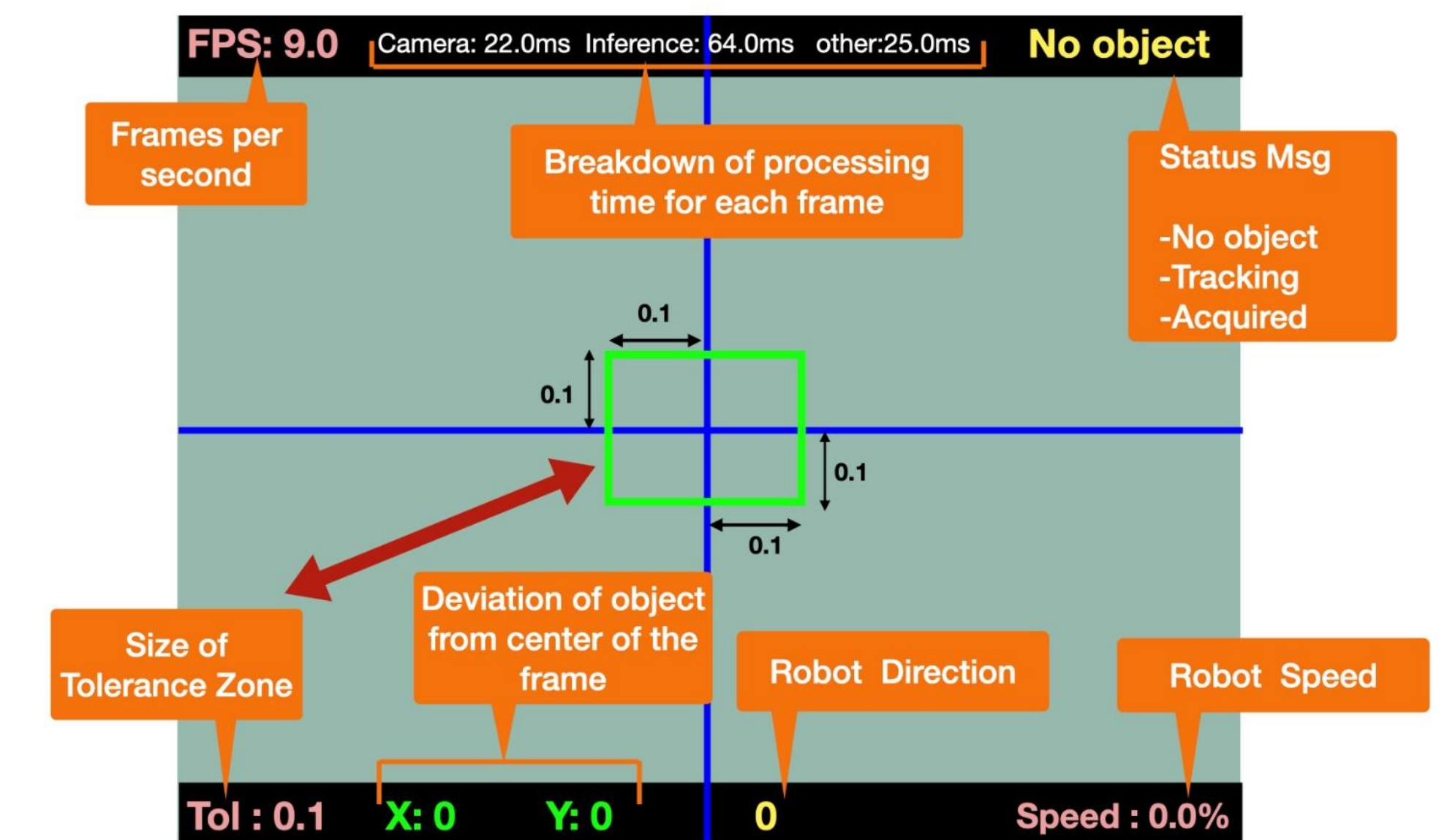
## RC Car Structure



We assembled the camera module, Raspberry Pi 4, and a battery onto an RC chassis. We have two electric motors in the front and back. The back moves the car forward/backward and the front motor steers the car.

## Object Tracking Mechanism

### TensorFlow Lite



We programmed the Raspberry Pi 4 using the Python Coding Library. We used Python libraries of TensorFlow Lite and Flask to get the object detecting working.