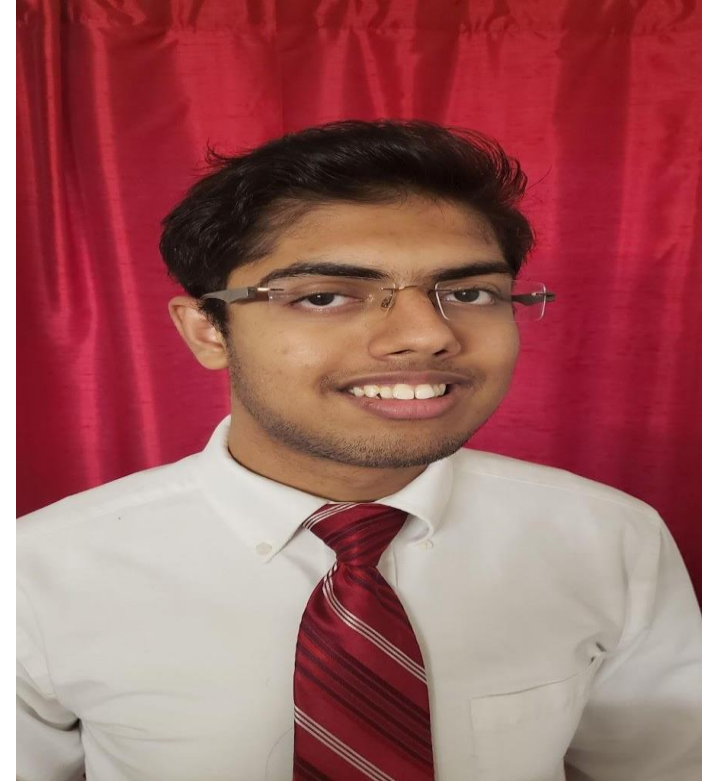# Delivery Drone

Varun Lagadapati and Cyrus Bilpodiwala

Team Introduction

Varun Lagadapati
Computer Science

Cyrus Bilpodiwala
Computer Science
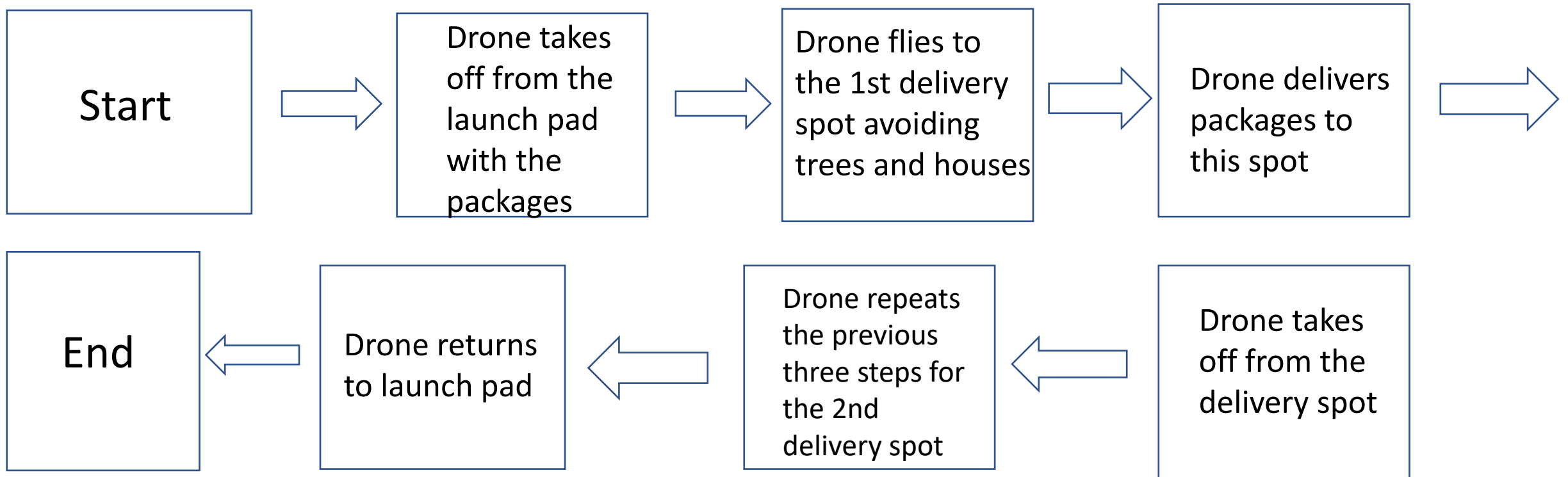
Overview of Project

- Background
  - DJI Tello drone delivers packages
- Goals
  - Planning a path to deliver packages while avoiding obstacles

Assumptions

- Drone is in the static scene

- Drone already has the packages from the pickup spot so it will deliver them to the designated spots

- Drone can perform regular operations such as going forward, backward, left, and right

Task Planner

Start	→	Drone takes off from the launch pad with the packages	→ Drone flies to the 1st delivery spot avoiding trees and houses	→ Drone delivers packages to this spot	→

End	← Drone returns to launch pad	← Drone repeats the previous three steps for the 2nd delivery spot	← Drone takes off from the delivery spot

Path Planner

The drone starts off at the starting position and comes back to the same position at the end after executing the tasks.

1st Delivery Spot

2nd Delivery Spot
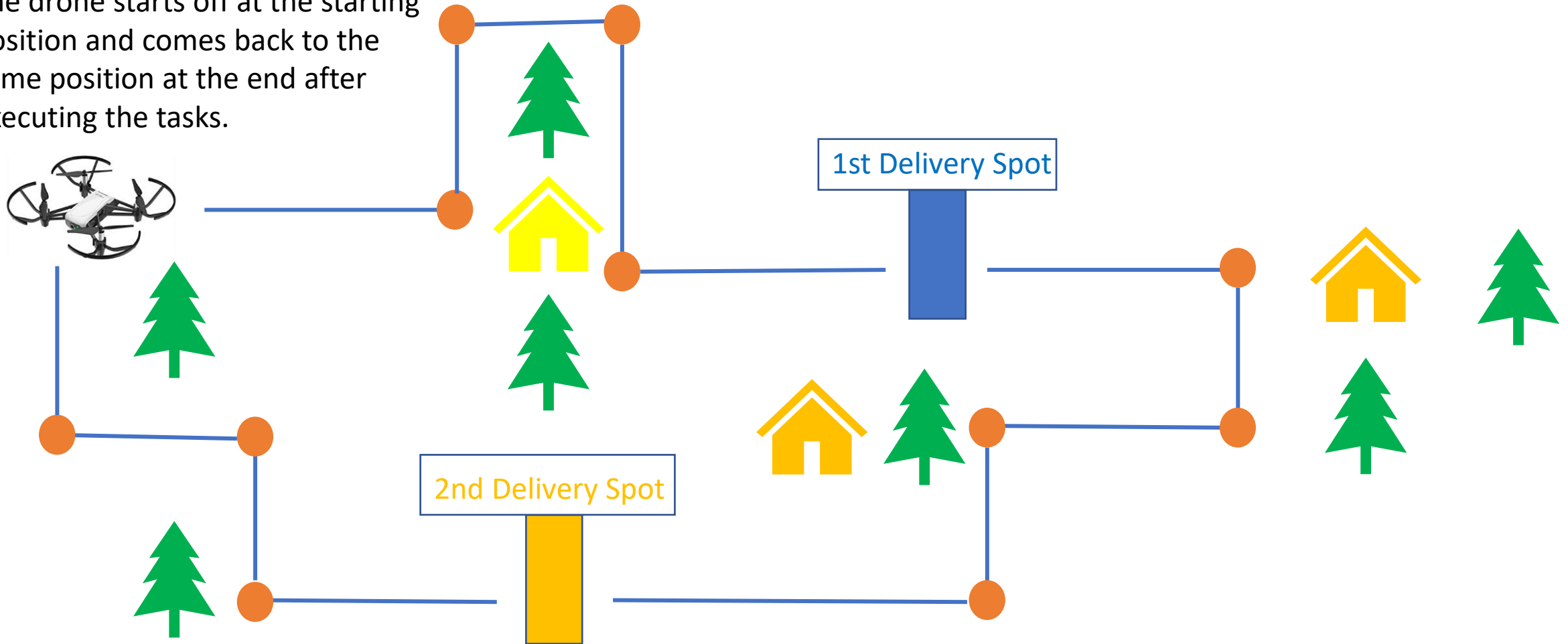
Outcomes Targeted

- **DJI Tello drone transports supplies in optimal time and accounts for all the constraints like avoiding obstacles including trees and houses, having limited sensory capabilities, limited flight time, and payload capacities given**
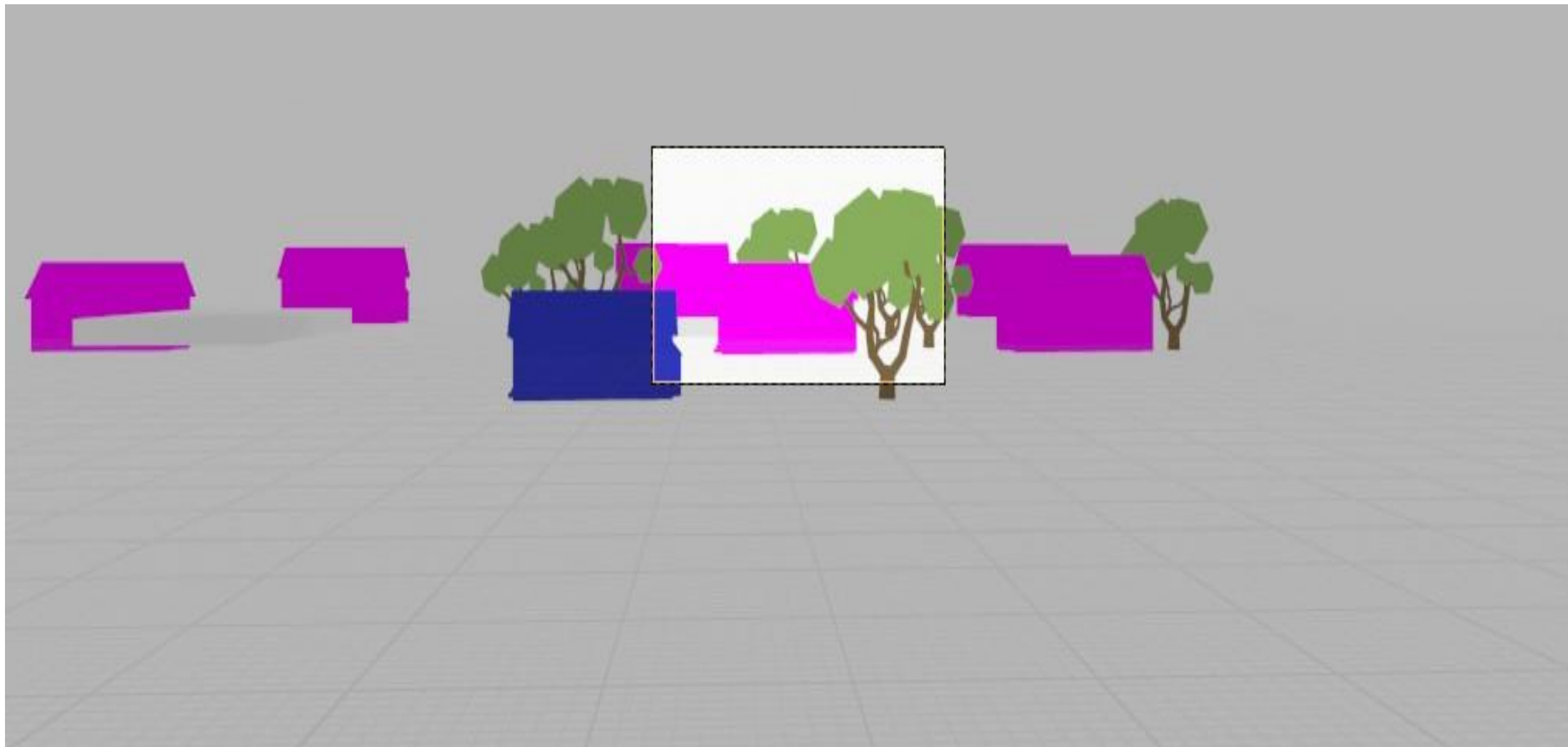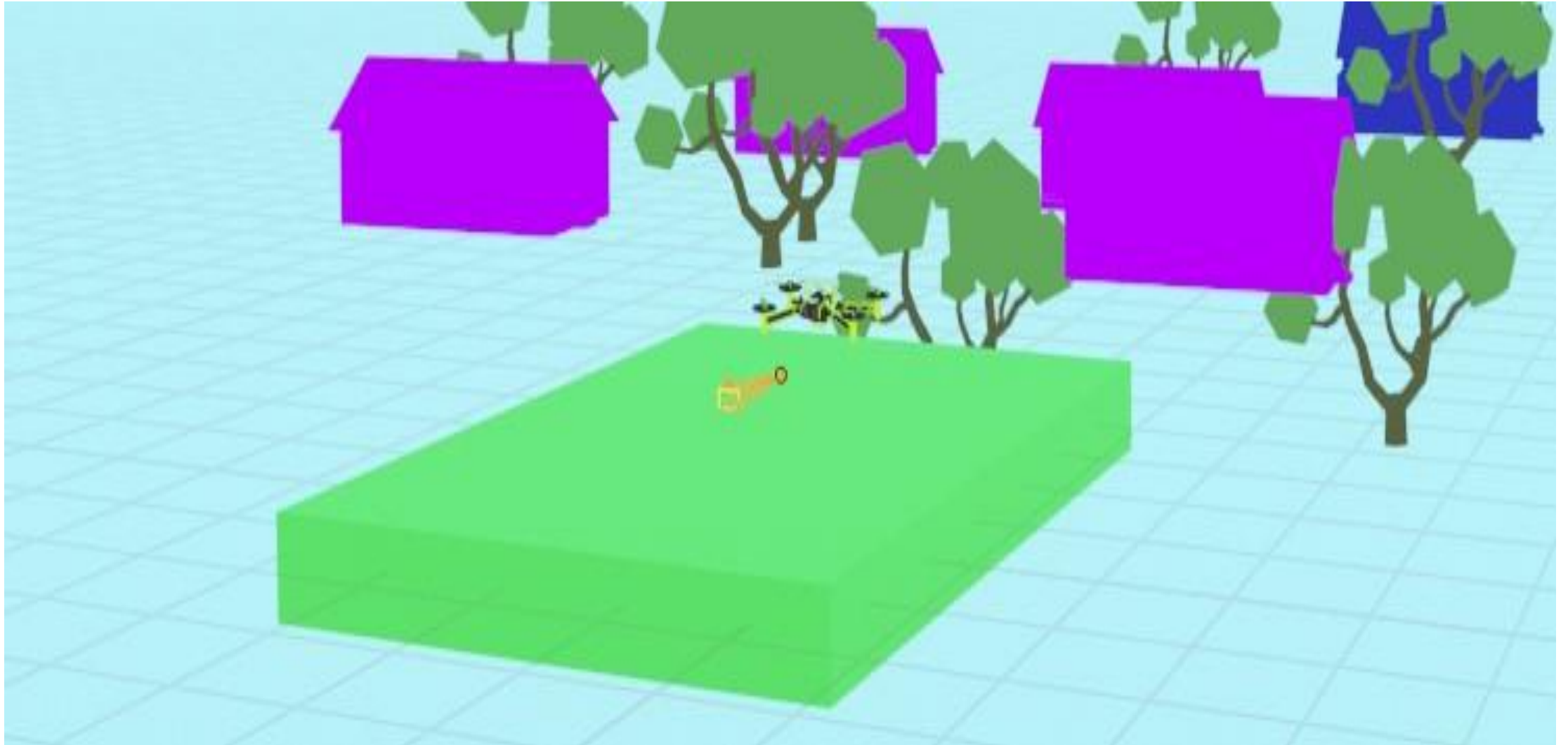
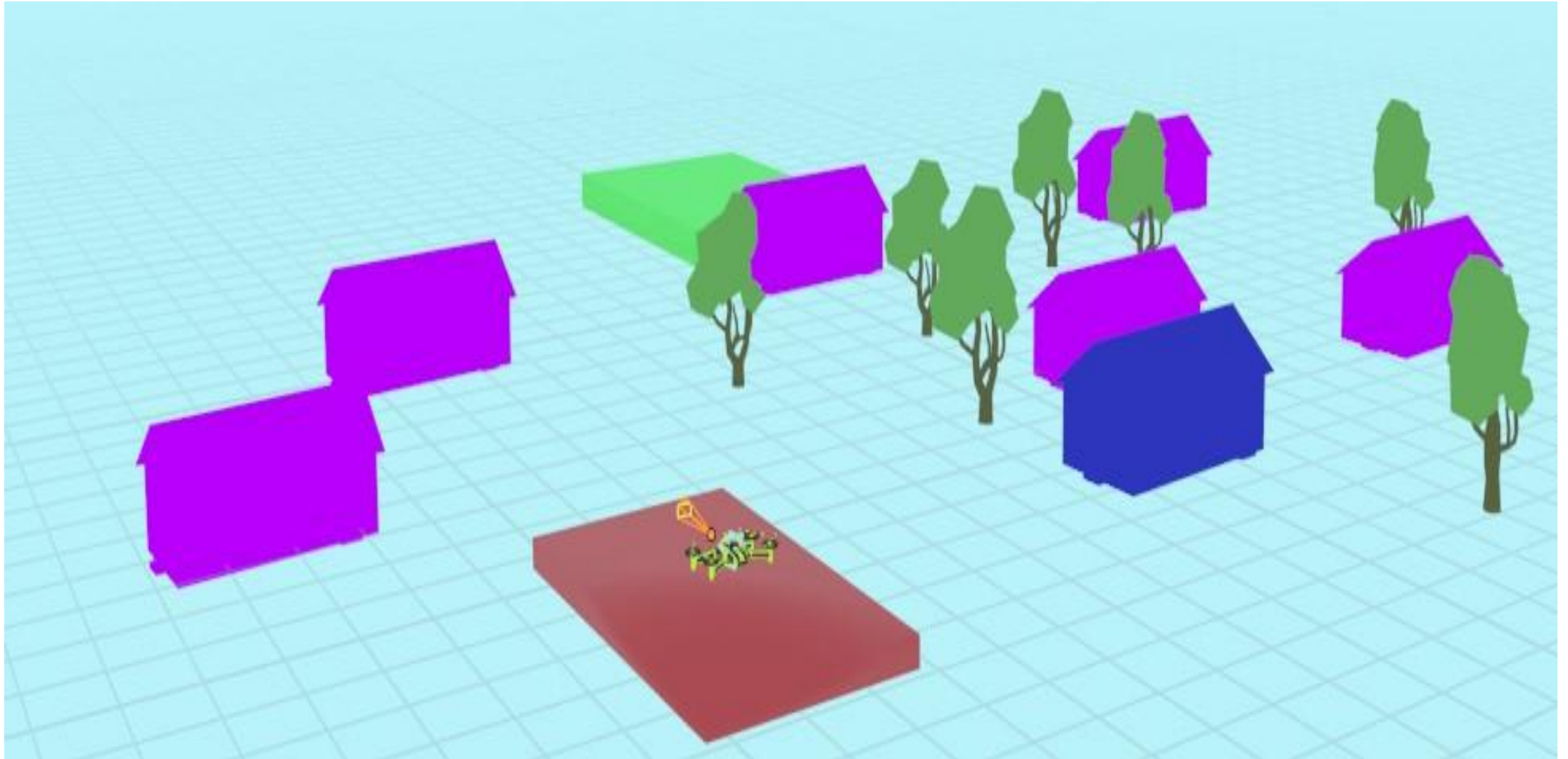# Drone Delivery Image
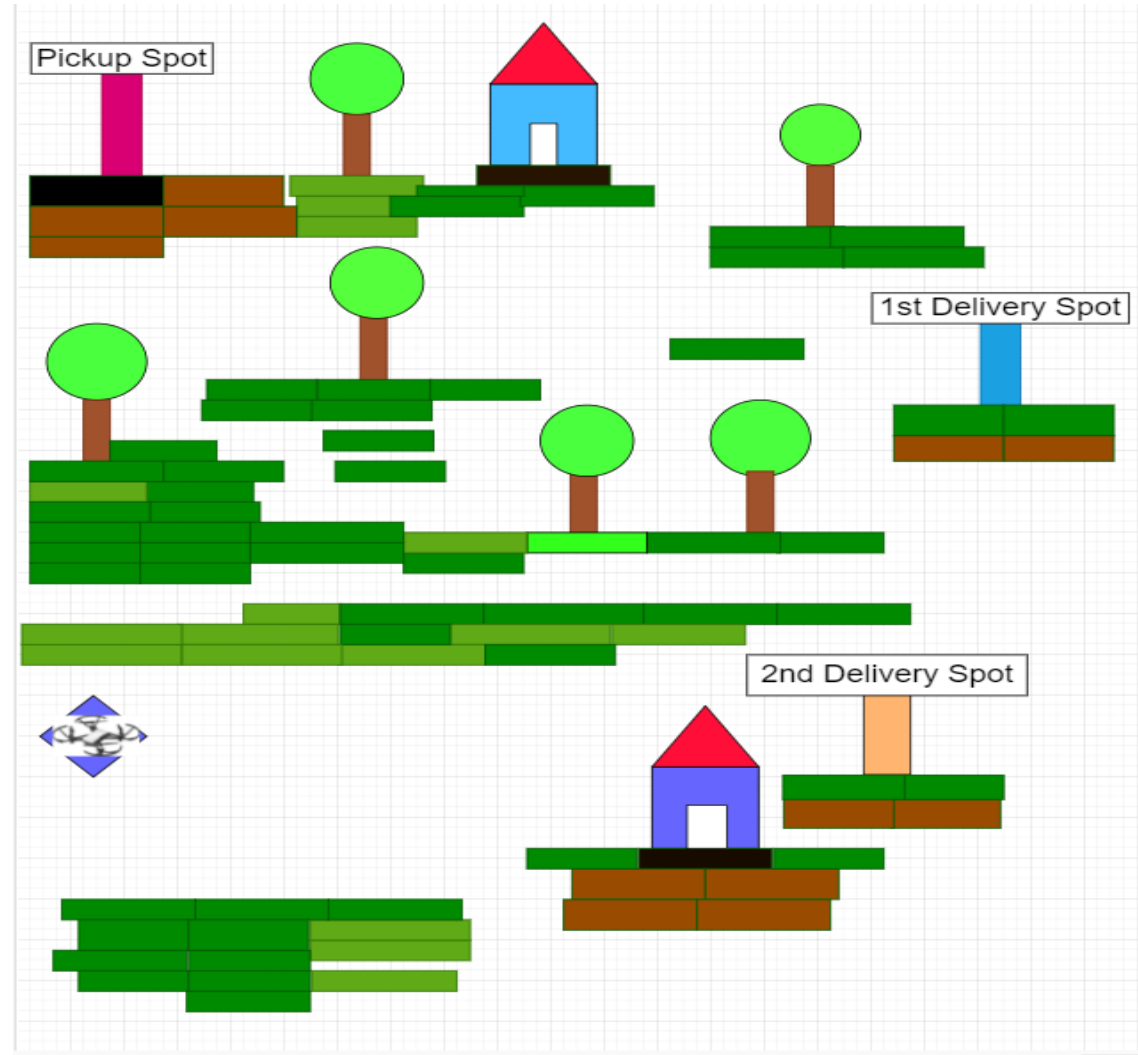
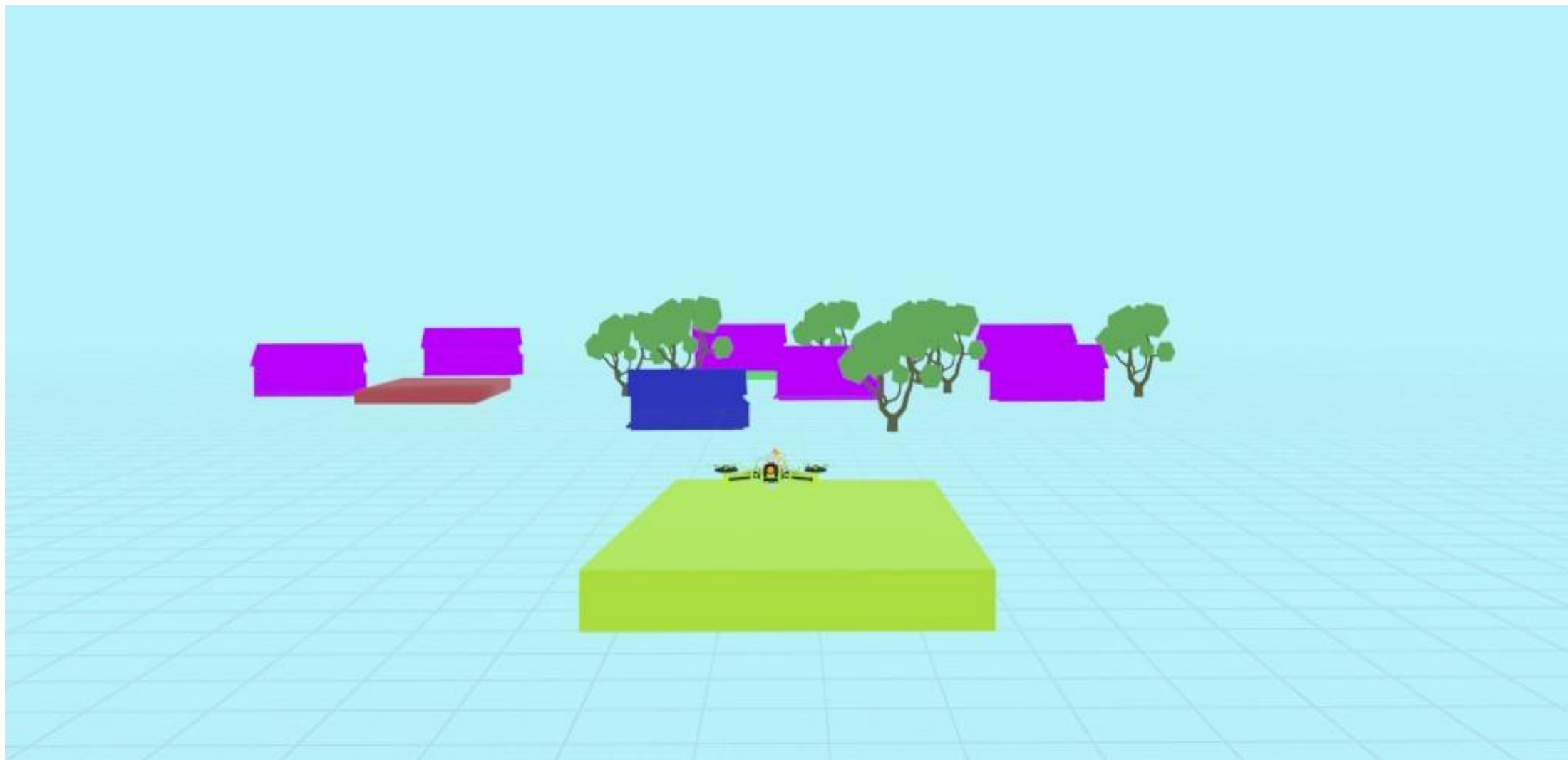# Past Simulation

Drone Camera's Front View

Drone at 1st Destination

Drone at 2nd Destination

Drone back to starting position

Reference

- Constantine Samaras Assistant Professor of Civil and Environmental Engineering, & Joshuah Stolaroff Environmental Scientist. (2019, August 27). *Delivering packages with drones might be good for the environment*. The Conversation. Retrieved November 3, 2021, from https://theconversation.com/delivering-packages-with-drones-might-be-good-for-the-environment-90997.