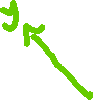
Meeting Notes for 1/20/22

In Attendance: John Mueller, Naimah Chapman, Dillion, and Elijah

Notes: Started at 11:20. Main objective is to finish refining backlog, defining what happens in each sprint, giving out tasks with time estimates and working on product vision. Elijah is going to work on some of the backlog work he has from last semester

Tasks and Tests

* Lidar
  + Settings.json
  + 1 UAV to detect object
    - Static
  + Multi UAV with overlapping arcs of vision
  + Multi UAV use Lidar
    - Static
  + Moving Objects
    - May have to consider offset
    - Is it a snapshot or data about movement?
    - Outputs Data frames, may have to sort through data frame
    - Question for Akbas about how detailed he wants this



* Object Detection
  + Lidar Data First
    - Array of Floats
  + Save Data Frames
  + Evaluate Δ in data frames; Calculate Δt => velocity
    - Utilize saved data frames
  + Calculate distance of UAV to each lidar coordinate
    - Start with a single frame to test if UAV is too close to object and data will be
* Collison Avoidance
  + Define Standoff Distance
  + Get distance array
  + Compare individual index distance & standoff
  + End loop if no collision
  + Avoidance Algorithm if collision
  + Call Pathing()

Lidar

Object Detection



Path Re-route

Avoid

Compare distance

* 3D Distance Equation
  + Input: 2 (x,y,z) coordinates
  + Output:



* Pathing
  + Waypoint
    - Linked Lists
  + Determines new route



* Avoidance
  + Move with parameters
    - Heading
    - Distance

