# Action Items

|  |  |  |
| --- | --- | --- |
| To Do | In Progress | Finished |
| * Think of how to deal with a bunch of gems all at once * Integrate color sensor code by having code in a more specific place * Move code into headers and libraries. * PID for straight wheel motion * Ultrasonic sensors * IR sensor and beacon * Finalize navigation system * Find a way to use potentiometer (motor speed?) * Refine turn angle for motors | * Pigmentation sensor * Servo sorting arm * Timer interrupt * Lengthen arm and update angles | * Create GitHub * Start initial (cleanish) code to get bot moving forward * Test ultrasonic sensor * Test pigmentation sensor * Rotating container arm * Debounce timer for button * Test debounce * Fix deposit servo * Test required values for both servos |

# Progress Tracking

## March th, 2024

* Activity
* Problems/Next Goals

## March 26th, 2024

* Activity
  + Unbricked the Arduino COM ports by uninstalling COM ports from device manager
* Problems/Next Goals

## March 21st, 2024

* Activity
  + Added snake code
    - Need to adjust turn angle
  + Testing timer interrupt but not working
    - V2 and v3 API breaking change
    - Something about the prescaler isn’t working
* Problems/Next Goals
  + Fix timer alarm

## March 20th, 2024

* Activity
  + Successfully found servo values for deposit and sorting arms
  + Coded color sensor to find green gems
* Problems/Next Goals
  + Arm needs to be lengthened
  + Tune color sensor to match ground RGB values
    - Think of a way to generalize

## March 18th, 2024

* Activity
  + Add interrupt and debounce for button
  + Decided against using a timer interrupt
    - Unsure how to get alarm to start only after button is pressed
  + Added new branch for tcs testing
    - Lots of changed variables and stuff, compare to main
      * Main is cooked too cuz git is cooked
* Problems/Next Goals
  + Test debounce
  + Test sorting
  + Test servo values for deposit and sort

## March 13th, 2024

* Activity
  + Added windmill motor code
    - Adjustable speed using LEDC
  + Servo motor code added
    - Using LEDC
* Problems/Next Goals
  + Servo is tweaking and buzzing

## March 12th, 2024

* Activity
  + Talked to Prof. Naish about code
    - Interrupt code take from slides and use same format as in code
    - Can use delay
    - Use timer interrupts
* Problems/Next Goals

## March 11th, 2024

* Activity
  + Started sample code for ultrasonic sensor
  + Incorporated code to detect when something is 5cm away and stopping motors
    - UNTESTED
  + Started sample code for TCS34725
    - Have smart LED shining color that TCS reads
    - Green = R: 22, G: 30, B: 16, C 70
    - Light blue = R: 34, G: 40, B: 35, C 112
* Problems/Next Goals
  + Sometimes reads 0cm when not using delay
  + Finish navigation system

## March 10th, 2024

* Activity
  + Updated README.md
  + Created this document
* Problems/Next Goals
  + Get started with ultrasonic sensors

## March 9th, 2024

* Activity
  + Created GitHub
  + Started initial clean code
    - Some of it is moved from labs, some variable changes and structural edits
* Problems/Next Goals
  + Invite everyone to GitHub
  + Start sweeping code