

Work Report Summary

Date Assigned: 3rd April, 2019

Date Submitted: 7th April, 2019

Name: Abhishek Deshpande

Subsystem: Coding

WRO 2019 Progress:

- OpenMV Camera: Completed colour detection code along with detection of which colours are the most prominent amongst the ones found – A list is returned in descending order of prominence for all the colours found.

https://github.com/RoboManipal-9-0/Coding-FirstYears/blob/abhishekDeshpande/Colour_detection.py

- Encoders/Motor Drivers: Tested encoder (RMCS-2284) functionality with Arduino and motor driver (MD30C). PID Functionality for the encoder is to be implemented later.

<https://github.com/RoboManipal-9-0/Coding-FirstYears/blob/abhishekDeshpande/rotaryEncoder/rotaryEncoder.ino>

Issues Faced

OpenMV Camera:

- Issues faced:
 - o Some methods in the documentation were actually non-existent. Alternate methods were found and used.
 - o Usage of multiple loops for detecting blobs was affecting performance. It was changed to a single loop containing blob code checks.
 - o Red and orange would get detected interchangeably. This was fixed by altering the thresholds.
- Current Issues:
 - o Thresholds need to be adjusted every time environment lighting changes. This results in colours being incorrectly detected or not being detected at all/detected partially in some cases.