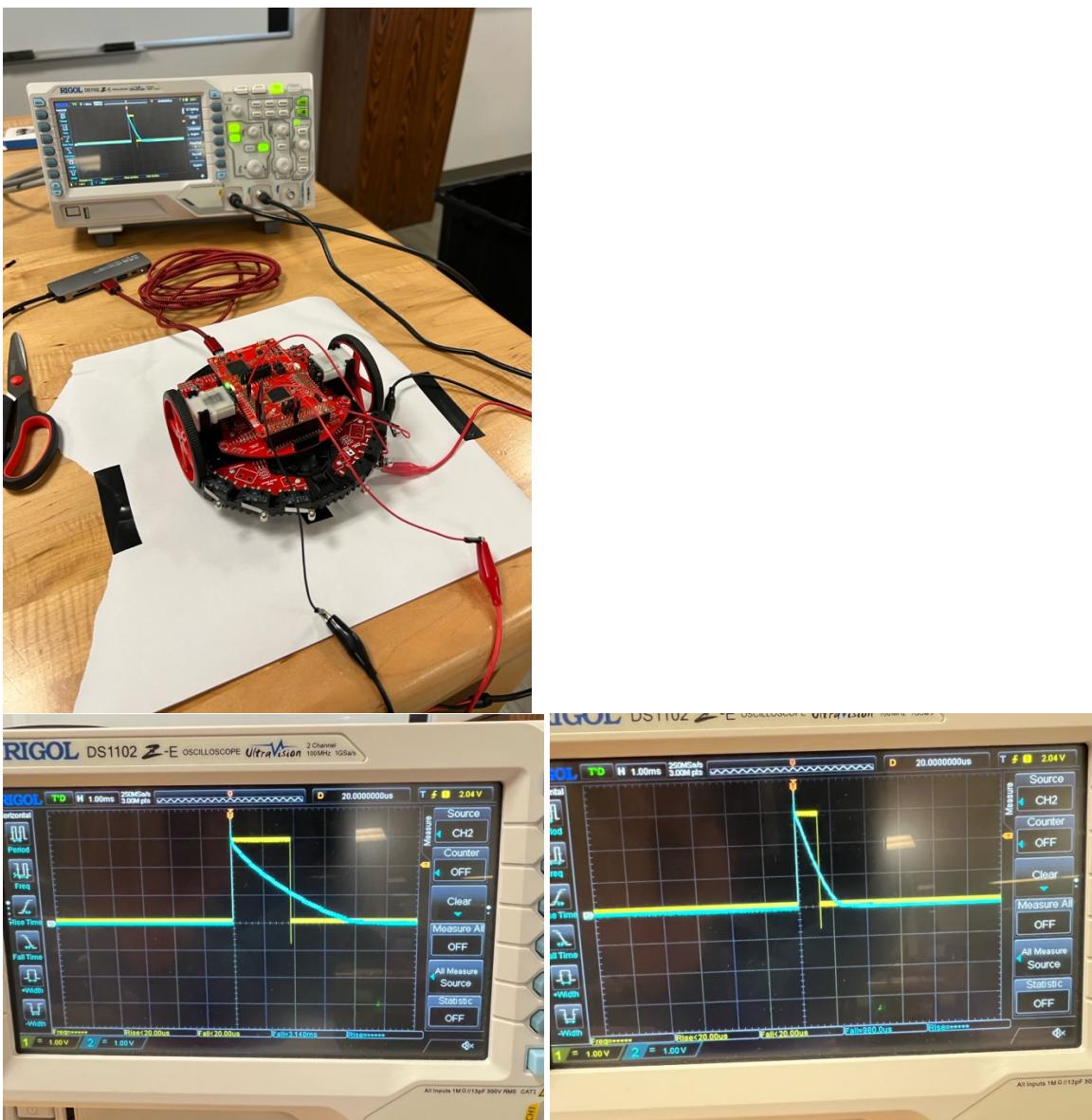


1.

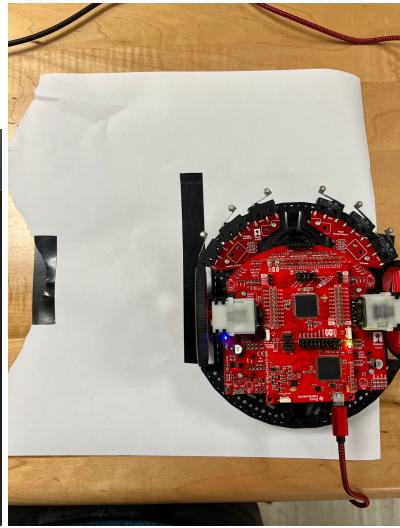


RC Time Constants: 980us / 3.140ms

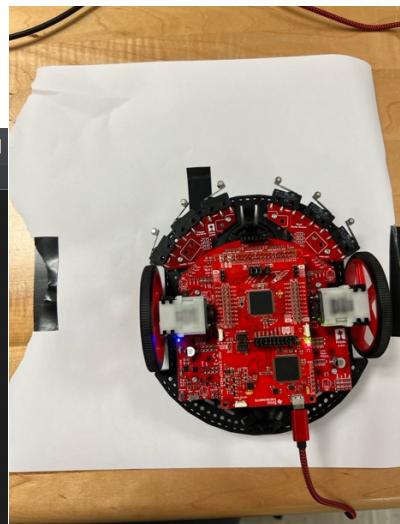
- i) The time constants are different when the system is over a white surface vs black surface due to the time the capacitor is discharged.
- ii) 0V-1.2V
- iii) 1.2V-3.6V

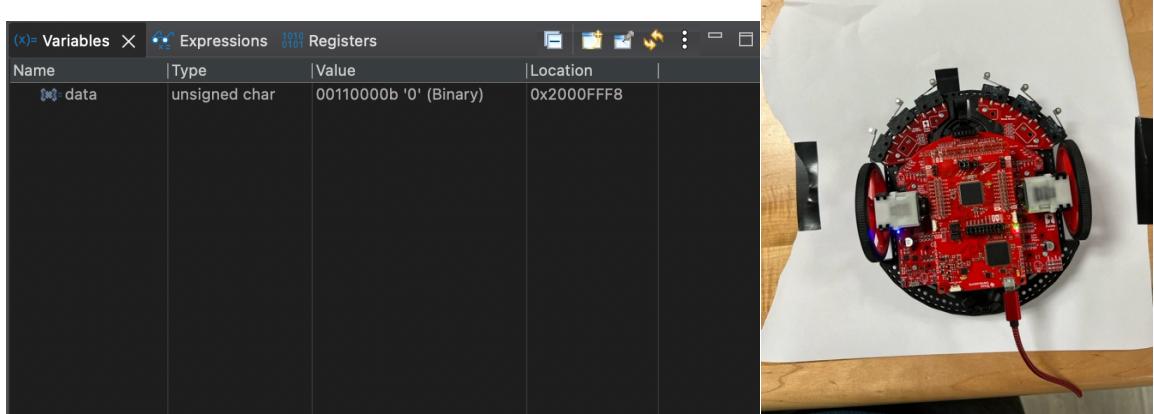
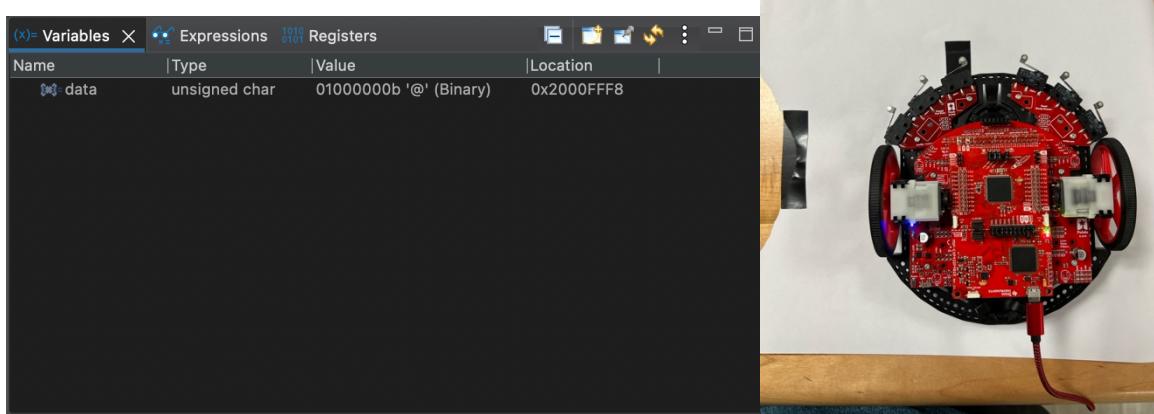
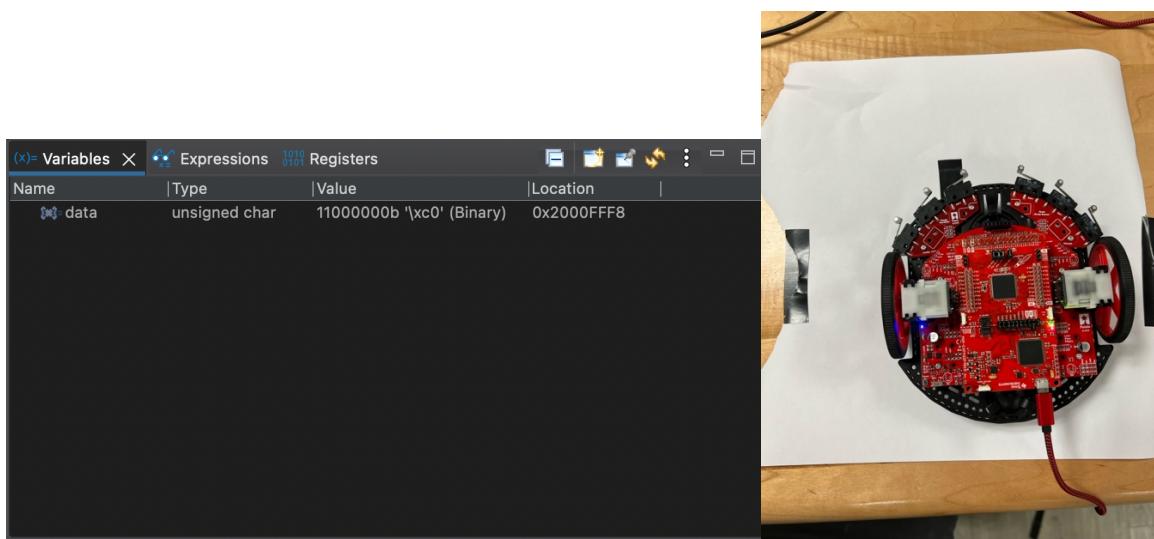
2.

Name	Type	Value	Location
data	unsigned char	0000000b '\x00' (Binary)	0x2000FFF8

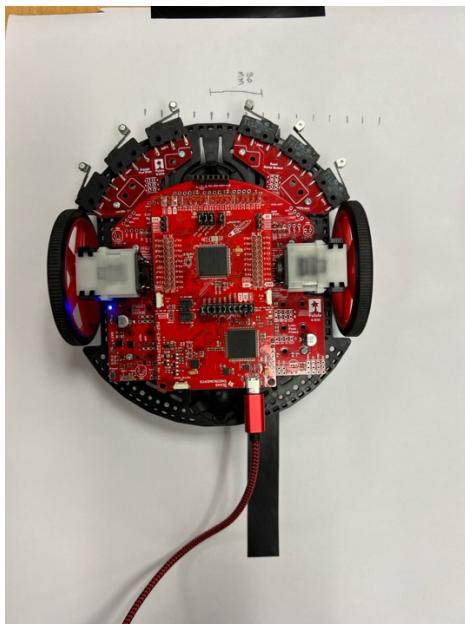


Name	Type	Value	Location
data	unsigned char	10000000b '\x80' (Binary)	0x2000FFF8

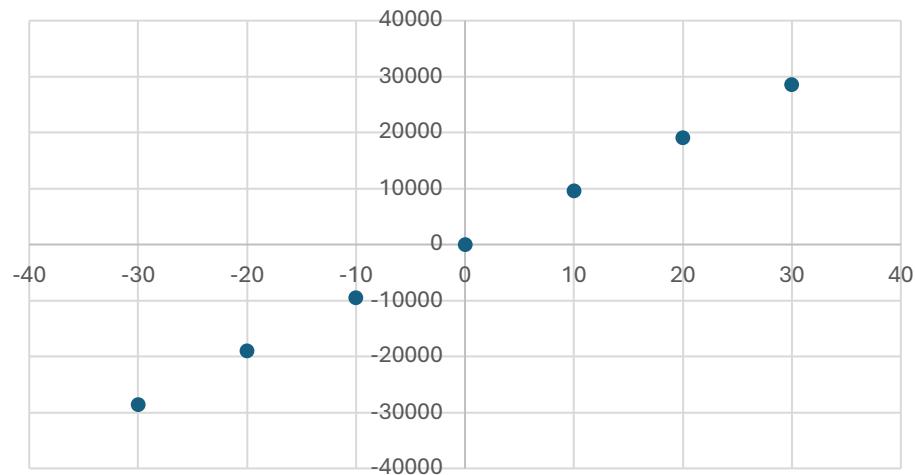




3.



Reflectance\_Position() Output



- iv) The accuracy from the line sensor is exactly what I expected, as the LEDs detect further left on the sensor array the more negative the values and vice versa as the sensor array detects towards the right.
- v) The outputs from Reflectance\_Position are monotonic due to the increasing nature of the graph. It is important for our application because you can take a measurement reading from the line sensor and directly correlate it to a distance/spot on the line sensor array.