

Shaan Yadav ay140

*"I have adhered to the Duke Community Standard in completing this assignment"*

### Pre-Lab Deliverable (1)

Sensor	Location on CX-Bot?	Pinout
Hall Effect Magnetic Sensor (A1324)	No special location on CX-Bot Shield	<ul style="list-style-type: none"><li>- Lead 1: Supply voltage connected to 5V, either at left or below breadboard.</li><li>- Lead 2: GND connected to ground, either at left or below breadboard.</li><li>- Lead 3: <math>V_{out}</math> connected to an analog input channel, A0 in the example code.</li></ul>
Color Sensor (TCS34725)	Already mounted on CX-Bot Shield	<ul style="list-style-type: none"><li>- Lead 1: SDA to Data line (analog input channel)</li><li>- Lead 2: SCL to Clock line (analog input channel)</li><li>- Lead 3: GND to ground</li><li>- Lead 4: <math>V_{in}</math> connected to 5V</li></ul>
Infrared Thermal Sensor (MLX90614)	No special location on CX-Bot Shield	<ul style="list-style-type: none"><li>- Lead 1: <math>V_{in}</math> connected to 5V</li><li>- Lead 2: GND to ground</li><li>- Lead 3: SCL to Clock line (analog input channel)</li><li>- Lead 4: SDA to Data line (analog input channel)</li></ul>
Radio-Frequency Identification Reader (ID-12LA)	Already mounted on CX-Bot Shield	<ul style="list-style-type: none"><li>- Lead 1: VCC connected to 5V</li><li>- Lead 2: DATA channel to serial receive port, on CX bot Serial1 (pin 19)</li><li>- Lead 3: GND to ground</li></ul>
Multi-Character Liquid Crystal Display (27977)	Already mounted on CX-Bot Shield	<ul style="list-style-type: none"><li>- Lead 1: Rx linked to Serial3</li><li>- Lead 2: Supply voltage connected to 5V</li><li>- Lead 3: GND to ground</li></ul>