Person Sensor by Useful Sensors

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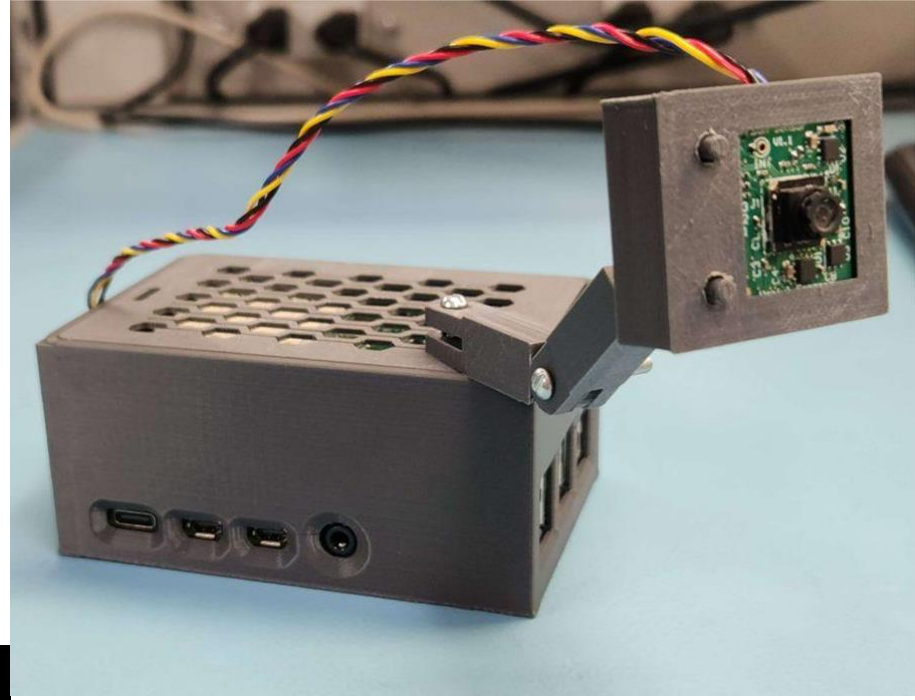

```
pi@raspberrypi:~ $ i2cdetect -y 1
     0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:                         -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- -- -- 1c -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- 39 -- -- -- -- -- --
40: -- -- -- -- -- -- UU -- -- -- -- -- -- -- -- 4f
50: -- -- -- -- -- -- -- -- -- -- -- -- 5c -- -- 5f
60: -- -- 62 -- -- -- -- -- -- -- 6a -- -- -- -- --
70: -- -- -- -- -- -- -- --
pi@raspberrypi:~ $
```

I2C address: 0x62

Bill Of Materials

Part	Price in CAD	Quantity	Shipping Cost	Tax	Subtotal Paid
2N4124 PNP Transistor from Parts kit	0.70	1			0.70
5mm Red LED from Parts kit	0.26	1			0.26
220 Ohm Resistor from Parts kit	0.02	1			0.02
2.2 kOhm Resistor from Parts kit	0.02	1			0.02
Raspberry Pi Extreme Kit	144.95	1			144.95
SD card reader	7.91	1			7.91
SenseHat	43.16	1			43.16
Network adapter	20.99	1			20.99
Ethernet cable	9.49	1			9.49
Person Sensor	18.99	1	8.00	2.47	21.46
Stacking Header	4.24	1	8.00	0.55	4.79
Qwiic socket, cables	13.69	1	8.00	1.78	15.47
16mm Standoff, M2.5 Screws	1.37	4	8.00	0.72	6.20
Leadfree Solder, PCB	102.73	1			8.54
3D Printing, Assembly	0.15/gram	TBD			0.15/gram
Totals					**283.96+**


Project selection #29
3D printing tutorial #3
Bill Of Materials #4
Project Roadmap #5
Purchase Sensor #6
KiCad Tutorial #22
Soldering/ Laser Cutting #23
Parts Arrival #24
PCB Assembly and testing #25
Coding #26
Troubleshooting #27
Demonstration #28
Final Presentation #2
Hardware report #1
Group project proposal #7
Hardware status #8
Mobile status report #9
Database status report #10
Hardware connectivity status report #11
Hardware/Firmware, Database, and Mobile App Independent Demonstration, #12
KiCad, Laser cutting, 3D Printing continued #13
Reading Week #14
Poster Draft, unit and production testing #15
Enclosure and integration status #16
Report Checklist #17
Presentation due, preliminary demonstrations #18
Troubleshooting, Project Demonstration #19
Group Final Presentation/Poster #20
Capstone Showcase #21

Reading/Writing to Sensor/Effector

```
1 [{'box_confidence': 99, 'box_left': 117, 'box_top': 67, 'box_right': 164, 'box_bottom': 144, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 69, 'box_left': 81, 'box_top': 151, 'box_right': 101, 'box_bottom': 183, 'id_confidence': 0, 'id': -1, 'is_facing': 0}]
0 []
0 []
0 []
0 []
0 []
1 [{'box_confidence': 99, 'box_left': 109, 'box_top': 49, 'box_right': 154, 'box_bottom': 133, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 112, 'box_top': 58, 'box_right': 153, 'box_bottom': 133, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 109, 'box_top': 67, 'box_right': 150, 'box_bottom': 140, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 83, 'box_left': 148, 'box_top': 65, 'box_right': 190, 'box_bottom': 133, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 157, 'box_top': 87, 'box_right': 194, 'box_bottom': 149, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
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1 [{'box_confidence': 98, 'box_left': 162, 'box_top': 94, 'box_right': 198, 'box_bottom': 149, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
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1 [{'box_confidence': 63, 'box_left': 112, 'box_top': 122, 'box_right': 141, 'box_bottom': 170, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 73, 'box_top': 81, 'box_right': 113, 'box_bottom': 145, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
0 []
1 [{'box_confidence': 69, 'box_left': 53, 'box_top': 90, 'box_right': 93, 'box_bottom': 154, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 70, 'box_top': 80, 'box_right': 113, 'box_bottom': 145, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 77, 'box_top': 85, 'box_right': 120, 'box_bottom': 152, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
1 [{'box_confidence': 99, 'box_left': 126, 'box_top': 65, 'box_right': 166, 'box_bottom': 133, 'id_confidence': 0, 'id': -1, 'is_facing': 1}]
```

Course Knowledge

- How to use a multimeter (Tech101 - Electric Circuits)
- How to read a resistor (Tech101 - Electric Circuits)
- The basics of creating a circuit to light up a led (Tech101 - Electric Circuits)
- How to test if a circuit is shorted (Tech101 - Electric Circuits)
- Connect to the Pi from VNC viewer (Ceng153 – Programming in C)
- Use WinScp to move files to the Pi (Ceng153 – Programming in C)
- The basics of programming (Tech104 – Programming Fundamentals)