Senior Project Deliverable Contract Project Name: Independent Recycling Sorter (IRS)

School Year: 2017-2018 MP: 2 Date: 12/4/17 Team #: 09

Students: Abhishek Hariharan and Jonathan Wong Instructor: Mr. Enzo Paterno

Initial: \_\_\_\_\_\_\_ Initial: \_\_\_\_\_\_\_ Initial: \_\_\_\_\_\_\_ 

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| Hardware Delivery | Firmware/Software delivery | Student |
| * Interface the Raspberry Pi Camera with the Raspberry Pi * Interface the Raspberry Pi with a pressure sensor (force-sensing resistor) * Interface the Raspberry Pi with the stepper motors (using any necessary motor drivers) * Plastic container to cover the hardware to mimic darkness (with camera being inside the box) * LED to indicate when when object is correctly placed on the sensor | * Interface to the Google Cloud Vision API (software connection to the WiFi) * Code that categorizes the recyclable object using the image taken and the stepper motors accordingly. * Code that lights up LED when object is correctly placed upon the sensor | * Both |

Demo Details (Include Packaging if any):

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| --- | --- | --- |
| Sequence # | Demo Description (Action/Response) | Worked (0 → 100%) |
|  | Place object inside the IRS container *incorrectly* (will show at the demo)  LED does not turn on (indicating that the object was not placed correctly upon the sensor)  Place object inside the IRS container *correctly*  LED turns on (indicating object was correctly placed)  Raspberry Pi camera takes picture of object (milk carton, water bottle, aluminum can, or “rejected item”)  Activate corresponding Stepper Motor  Repeat accordingly with other objects. |  |

Signatures:

Student 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

Student 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

Instructor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 