**Team Members:**

* Thomas Bock
* Ammar Ahmed
* Tan Hua
* Jan Michael Golez

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**Group Meeting Minutes:**

● Alteration of CNC Laser Machine

● Purchase Raspi Camera

● OpenCV through Python and Python throuhg octoprint

**Summary of Team Tasks Assigned:**

1. Housing/Ventilation System
   1. Examine Parts Needed for Ventilation System(e.g. cost of materials)
2. Stand Alone Management System(***S.A.M.S.)***
   1. Ensure that Management System is working Properly
   2. Continue Installing Octoprint to ensure Python works with Open CV and G-Code
3. Solitary Software System
   1. Research the necessary software package that can be read in RasPi3
   2. Understand how to connect a bridge between the software with the automated camera aspect.
4. Automated/Enhance Camera System
   1. Begin Researching on OpenCV-Python
   2. Research on different microcontrollers that is compatible with OpenCV-Python

**Summary of Team Accomplishments:**

1. Housing/Ventilation System
2. Parts have been examine, a group consent is required to further proceed with the materials
3. Stand Alone Management System
4. Management System is Working
5. Virtual Keyboard
6. Solitary Software Program
7. Python found most compatible between software, management system, and camera system
8. Begin Transcripting the language into Python
9. Automation/Enhance Camera System
10. Research on OpenCV-Python and installation of the software and libraries needed
11. Raspberry Pi3 was found to be the most compatible for making a connection between camera system and management system

**Tasks Assigned for Next reporting period:**

1. Housing/Ventilation System
2. Proceed discussion with parts and began redesigning enclosure/ventilation system
3. Stand Alone Management System
4. Fix all bugs and downloads Octoprint to work conjunctively with the camera.
5. Translating all software into Python.
6. Solitary Software Program
7. Continue to transcript language into Python
8. Help with bridging management sytem, Camera, and Software
9. Automation/Enhance Camera System
10. Purchase RasPi3
11. Install OpenCV-Python in RasPi3

**Issues:**

1. Octoprint Set-Up Issues.

**Individual Summary (cont.)**

**Name:** Thomas Bock

**Tasks Assigned for this reporting period:**

1. Examine Parts Needed for Ventilation System(e.g. cost of materials)

**Accomplishments this reporting period:**

1. Parts Examined for enhancement of Prototype CNC Machine

**Issues:**

1. None

**Tasks Assigned for Next reporting period:**

1. First Draft Design of Ventilation/Enclosure

**Individual Summary (cont.)**

**Name:** Jan Michael Golez

**Tasks Assigned for this reporting period:**

1. Set Up Management System on Raspi3

2. Continue Installing Octoprint

**Accomplishments this reporting period:**

1. Management System is working

2. Virtual Keyboard Installed

**Issues:**

1. Octoprint cannot be downloaded and set up correctly.

2.

**Tasks Assigned for Next reporting period:**

1. Set Up Octoprint

2. Begin Translating G-code into Python through octoprint.

**Individual Summary (cont.)**

**Name:** Tan Hua

**Tasks Assigned for this reporting period:**

1. Research the necessary software package that can be read in RasPi3
2. Understand how to connect a bridge between the software and the automated camera aspect.

**Accomplishments this reporting period:**

1. Python found most compatible between software, management system, and camera system
2. Begin Transcripting the language into Python

**Issues:**

1. None

**Tasks Assigned for Next reporting period:**

1. Continue to transcript language into Python
2. Help with bridging Management System, Camera, and Software

**Individual Summary (cont.)**

**Name:** Ammar Ahmed

**Tasks Assigned for this reporting period:**

1. Continue researching on using OpenCV in Python.
2. Start interfacing the camera with the RPi3 and testing the compatibility of OpenCV by writing a simple code (edge detection, object detection...etc).

**Accomplishments this reporting period:**

1. Research was done on using OpenCV-Python.
2. Started and progressed on researching on Python and getting familiar with the language.
3. The camera functionality on the RPi3 was successfully tested and verified it worked.

**Issues:**

1. The test code for the OpenCV-python gives an error when runing the code. The problem is that there is a dependency file “Scipy” that needs to be installed and compiled. However, the dependency file was not compiling on the Rpi3 due to some errors. However, after running few codes on the terminal of the RPi3, the “scipy” was successfully downloaded.

**Tasks Assigned for Next reporting period:**

1. Continue testing OpenCV-python using sample codes
2. Research for the most compatible camera for RPi3.
3. Start researching on camera calibration.