Jimmy Vang

1/9/2017

Electronic Project

**Daily Log/Timeline**

**[Year] - 2017**

[Month/Day]:

**1/9:**

* **Objective 1 Started: Research and Buy**

LINKS FOUND:

How to: The Complete guide to Raspberry Pi Robotics: <http://pibot.org/how-to/>

Raspberry-Pi: <https://www.element14.com/community/community/raspberry-pi>

**1/10:**

- Find parts.

- Research and Browse web.

LINKS FOUND:

- Python: <https://www.python.org/>

- Python Tutorial: <https://docs.python.org/2/tutorial/>

**1/11:**

- Find parts.

- Research and Browse web.

LINKS FOUND:

- Raspberry Pi Python Tutorial: <https://www.raspberrypi.org/learning/python-intro/>

- How To Write And Run A Python Program On The Raspberry Pi: <http://www.circuitbasics.com/how-to-write-and-run-a-python-program-on-the-raspberry-pi/>

**1/12:**

- Find parts.

- Research and Browse web.

**- Ordered Items:**

- 2WD Beginner Robot Chassis: <http://www.robotshop.com/en/2wd-beginner-robot-chassis.html>

**1/13:**

- Find parts.

- Research and Browse web.

**- Ordered Items:**

- Pololu DC Motor Driver 1A, 4.5V-13.5V- TB6612FNG: <http://www.robotshop.com/en/pololu-dual-dc-motor-driver-1a-4-5v-3-5v-tb6612fng.html>

**1/14:**

- Find parts.

- Research and Browse web.

**- Ordered Items:**

- 400 Tie Point Interlocking Solderless Breadboard: <http://www.robotshop.com/en/400-tie-point-solderless-interlocking-breadboard.html>

- 65 x 22 Gauge Assorted Jumper Wires: <http://www.robotshop.com/en/65-22-gauge-assorted-jumper-wires.html>

- DFRobot Assorted Jumper Wires Premium M/F Pack of 65: <http://www.robotshop.com/en/dfrobot-assorted-jumper-wires-premium.html>

**1/15:**

- Find parts.

- Research and Browse web.

**- Ordered Items:**

- Raspberry Pi 3 Model B V1.2 Computer Board: <http://www.robotshop.com/en/raspberry-pi-3-computer-board.html>

- RPi Camera for Raspberry Pi: <http://www.robotshop.com/en/rpi-camera-raspberry-pi.html>

- 300mm Flex Cable for Raspberry Pi Camera: <http://www.robotshop.com/en/300mm-flex-cable-raspberry-pi-camera.html>

- Lynxmotion Pan and Tilt Kit / Aluminium: <http://www.robotshop.com/en/lynxmotion-pan-and-tilt-kit-aluminium2.html>

**1/16:**

- Find parts.

- Research and Browse web.

**- Ordered Items:**

- Self-Adhesive Pure Copper Heat Sink For Raspberry Pi: <http://www.robotshop.com/en/self-adhesive-pure-copper-heat-sink-raspberry-pi.html>

- 120cm A to Micro B USB Cable: <http://www.robotshop.com/en/120cm-a-micro-b-usb-cable.html>

**1/17:**

- Find parts.

- Research and Browse web.

**- Ordered Items:**

- Wall Adapter Power Supply - 5VDC 2A: <http://www.robotshop.com/en/wall-adapter-power-supply-5vdc-2a.html>

**1/18:**

- Look up parts.

- Research and Browse web.

**- Finished writing Project Details/Description.**

**- Finished Researching Project.**

**- Objective 1 Finished : Research and Buy.**

**1/19:**

**- Objective 3 Started: Learn and Study Python Coding + Program Autonomous Robot.**

- Researched machine learning.

- Researched Python coding.

- LINKS FOUND:

- Your First Machine Learning Project in Python Step-By-Step: <http://machinelearningmastery.com/machine-learning-in-python-step-by-step/>

- Python Machine Learning: Scikit-Learn Tutorial: [https://www.datacamp.com/community/tutorials/machine-learning-python#gs.j6EqKKQ](https://www.datacamp.com/community/tutorials/machine-learning-python" \l "gs.j6EqKKQ)

- Scikit-Learn Site: <http://scikit-learn.org/stable/index.html>

**1/20:**

- Buy Parts currently found.

**- Ordered Items:**

- Adjustable Camera Mount Holder Stand Bracket For Raspberry Pi Camera: <https://www.newegg.com/Product/Product.aspx?Item=9SIAA0C4RC1939&ignorebbr=1>

**1/21 to 1/22:**

- Researched Python coding.

**1/23:**

**- Turned in BUDGET.**

- Researched Python coding.

LINKS FOUND:

- Learn Python <https://www.learnpython.org/en/>

**- Ordered Items:**

- Movo GM100 Lavalier Lapel Clip-on Omnidirectional Condenser Microphone: <https://www.newegg.com/Product/Product.aspx?Item=9SIA5ST1Z63422&ignorebbr=1>

- 7.1 Channel USB External Sound Card Audio Adapter: <https://www.newegg.com/Product/Product.aspx?Item=9SIA67038G2473&ignorebbr=1>

**1/24:**

- Searched for Raspberry-Pi 3 touchscreen.

- Waiting for shipped parts.

- Learn Python

**- Ordered Items:**

- Adafruit PiTFT 2.4” HAT Mini Kit – 320x240 TFT Touchscreen: <https://www.adafruit.com/products/2455>

- Brass M2.5 Standoffs for Pi HATs - Black Plated - Pack of 2: <https://www.adafruit.com/products/2336>

- Tactile Switch Buttons (6mm slim) x 20 pack: <https://www.adafruit.com/products/1489>

**1/25:**

- Waiting for shipped parts.

- Learn Python

**1/26:**

**- Turned in TIMELINE.**

**1/27 to 1/31:**

- Shipped parts here.

**- Setup Robot. (DONE)**

**- Setup Raspberry-Pi 3. (DONE)**

- **Setup computer vision system for camera. (DONE)**

**Links:**

Direct Network Connection using ETHERNET

- <https://pihw.wordpress.com/guides/direct-network-connection/>

Remote Access to Raspberry Pi Using VNC

- <https://www.raspberrypi.org/documentation/remote-access/vnc/>

RealVNC download

- <https://www.realvnc.com/download/viewer/>

Adafruit 2.4" PiTFT HAT with Resistive Touchscreen Mini Kit OVERVIEW

- [https://learn.adafruit.com/adafruit-2-4-pitft-hat-with-resistive-touchscreen-mini-kit?view=all#overview](https://learn.adafruit.com/adafruit-2-4-pitft-hat-with-resistive-touchscreen-mini-kit?view=all" \l "overview)

LOW-COST RASPBERRY PI ROBOT WITH COMPUTER VISION

- <https://jeremykarnowski.wordpress.com/2015/08/26/low-cost-raspberry-pi-robot-with-computer-vision/>

Raspberry Pi 3 for computer vision

- <http://bennycheung.github.io/raspberry-pi-3-for-computer-vision>

PiCamera Doc

- <http://picamera.readthedocs.io/en/release-1.9/index.html>

pigpio (PiGPIO)

- <http://abyz.co.uk/rpi/pigpio/index.html>

Ninja-IDE

- <https://arghbox.wordpress.com/2013/06/09/ninja-ide-on-the-raspberry-pi/>

OpenCV-3.2.0 Install Guide

- <http://pklab.net/?id=392&lang=EN>

matplotlib install

- <http://matplotlib.org/2.0.0/users/installing.html>

**2/1 to 2/4:**

**- Setup servos for camera. (DONE)**

**Links:**

Using a servo motor

- [https://learn.adafruit.com/adafruits-raspberry-pi-lesson-8-using-a-servo-motor?**view=all**](https://learn.adafruit.com/adafruits-raspberry-pi-lesson-8-using-a-servo-motor?view=all)

**2/5 to 2/14:**

**- Program simple line follower. (DONE)**

**Links:**

20+ Hand-Picked Raspberry Pi Tutorials in Computer Vision

- <https://www.intorobotics.com/20-hand-picked-raspberry-pi-tutorials-in-computer-vision/>

**2/15 to 2/26:**

**- Program face recognition. (DONE)**

**Links:**

OpenCV and Pi Camera Board

- <https://thinkrpi.wordpress.com/2013/05/22/opencv-and-camera-board-csi/>

**2/27:**

**- Mid-Term Report is DUE. (DONE)**

**- Program robot to track objects. (Work In Progress)**

**Links:**

Python3 Keyboard Input

- <http://www.python-course.eu/python3_input.php>

Wall-e-robot

- <http://blog.oscarliang.net/wall-e-robot-in-real-life/>

**2/28 to 3/31:**

**- Program robot to track objects. (DONE)**

**- Work on Threading.**

**4/1 to 5/21:**

**- Program simple obstacle avoidance. (ON HIATUS)**

**- Program robot to follow a person. (ON HIATUS)**

**- Program robot to see surroundings and avoid them. (ON HIATUS)**

**- Fix bugs and optimize code. (****NOT FINISHED)**

**- Threading Finished (DONE)**

**- Create a Demo (DONE)**

**5/21 to 5/27:**

**- Work on report. (DONE)**

**- Work on speech. (DONE)**

**5/29 to 6/1:**

**- Practice speech. (DONE)**