**Raspberry Pi Set-up**

On another (Linux) machine which can access the SD card:

Loading Operating System

1) To determine the name of the SD card

-Open Terminal

-type ‘df -h’ without the quotes before inserting card

-A list of mounted devices will appear

-Insert card and type ‘df -h’ again. The newly listed device is the name of the SD card.

-For example, ours was listed as ‘/dev/mmcblk0p1’

-Note: the name of the card is ‘mmcblk0’ and the partition designation is ‘p1’

2) Unmount card

-type ‘umount’ followed by the full name of your SD card

-For example, ours would be ‘ umount /dev/mmcblk0p1’

3) Download the latest OS released by Raspberry Pi

-At the time this is being written, the latest release is “Raspian Jessie with Pixel”

-This OS weighs 4.3 GB.

-Extract the file and make note of the name and location of the file

-Ex: ‘2016-09-23-raspian-jessie.img’ located under ‘/home/dmauri’

4) Install OS image on SD card

- ‘sudo dd bs=4M if=2016-09-23-raspian-jessie.img of=/dev/mmcblk0’

-sudo gives permission if you aren’t logged in as root

-USE CAUTION WHEN USING THE COMMAND dd

-If used improperly, the operating system on your current device can be erased

-After ‘if=’ type in the file name of the OS image to be loaded

-After ‘of=’ type in the name of the SD card without the partition index

-Note: At this point terminal will stop responding. It will not demonstrate how much progress has been made. To check on progress, open another Terminal window and type ‘sudo pkill -USR1 -n -x dd’

-When the system has finished writing the image to the card, it will generate a report such as:

‘1036+1 records in

1036+1 records out

4348444672 bytes (4.3 GB, 4.0 GiB) copied, 799.367 s, 5.4 MB/s

5) Synchronize and Eject Card

-type in ‘Sync’

-This will pull down everything that was left in the cache so that you can unmount

-Unmount card using the previously indicated umount command.

For the Pi itself:

Getting MAC Address

MAC Address is often required to establish Internet connection

1) In terminal type ‘ifconfig eth0’

-This will generate a report. Look for the the line:

‘eth0 Link encap: Ethernet HWaddr ’

-The characters following HWaddr is the MAC Address

Installing Arduino IDE

1) In terminal type ‘sudo apt-get install arduino’

-Installation will take time but upon completion can be accessed via terminal or from the menu.

Installing Miniconda

1) In terminal type the following in the listed order:

-‘wget http://repo.continuum.io/miniconda/Miniconda-3.5.5-Linux-armv6l.sh’

-‘md5sum Miniconda-3.5.5-Linux-armv6l.sh’

-This should return something like ‘2f37cb775ec3e482280a7bd6b97ee501’

-‘/bin/bash Miniconda-3.5.5-Linux-armv6l.sh’

Should also add git and emacs

sudo apt-get install git