WARNING: These are instructions. Don't read them.

Raspberry Pi GPS Setup

There are two parts to these instructions. With your Pi started up & connected to the internet, complete Part I. Once you've completed Part I, reboot your Pi, connect it to a battery source, boot it back up and run Part II.

Part I: One Time Raspberry Pi Setup Instructions:

Setup GPS Services on your Pi. Open your Terminal and type the following commands:

1. `wget http://share.ialab.dsu.edu/no_ls/gps2.sh`
2. `leafpad gps2.sh`
3. Leafpad will open on your pi.
    a. Click **File > Save As**… in Leafpad
    b. Change Character Encoding to be: **LF** instead of CR+LF (see Figure 1)
    c. Do <u>not</u> change the filename, click **Save**
    d. When asked to Overwrite, say **Yes**
    e. Close Leafpad
4. Go back to the terminal and type the following commands:
5. `sudo chmod +x ./gps2.sh`
6. `sudo ./gps2.sh`
7. There should be a block of text scrolling on your screen now. Ask your teacher to verify.
8. Plug in your USB GPS receiver
9. Check your power!
    a. If you're using a battery to power your Pi already, then reboot.
    b. If you're using a power cord, then shutdown your Pi (Click the Raspberry in the upper left corner, **Shutdown>Shutdown**). Once shutdown, boot your Pi back up using a battery.
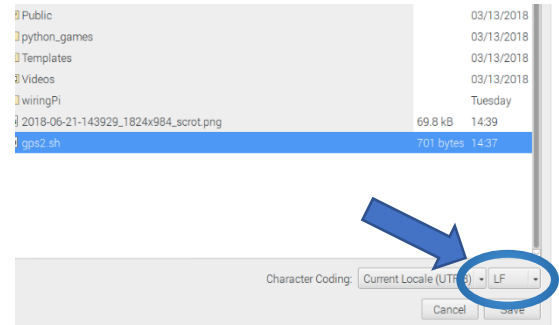10. Once your Pi is booted back up, you're ready for Part II!

Figure 1: Make sure to change the Character Coding

Part II: How to Start the GPS Tracker:

We'll start our GPS tracker trying to locate you! Make sure your Pi is running on battery power before starting this stage!

1. From the Terminal: type:
    `sudo python ./gpsdDataFetcher.py`
2. You'll have a message like what's shown in Figure 2
    a. "Unable to Obtain GPS Lock"
    b. This means that you couldn't detect enough satellites to guess a location.
3. Leaving your Pi powered up, unhook the monitor, keyboard, & mouse.
4. Go outside! Make sure to stay away from tall buildings
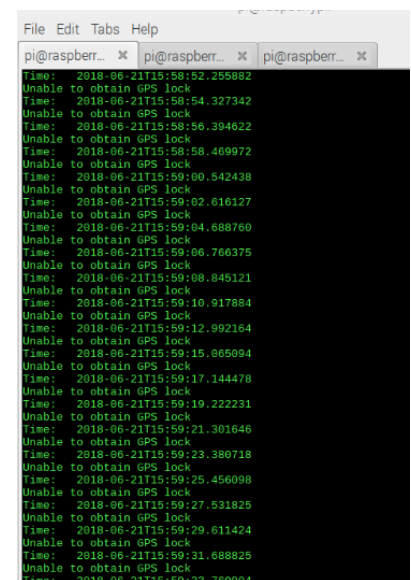5. When you come back, you should have a file called *data.csv* in your home directory. Upload this file to http://gpsvisualizer.com to build a map!

Figure 2: GPS signal is too weak