ECE 476/676 - Homework #10

GPS & BlueTooth - Due Monday, November 18th

GPS: How Fast Can You Run?

1) (30 points): Write a Python program which measures how fast you can run using a GPS sensor.

- Record your speed with a GPS sensor
- Start new recording by pressing button GP15
- While recording, detect the maximum speed seen from the GPS sensor, and
- Display the top three speeds on graphics display

Include

- Your Python program
- Data showing it is working
- A photo of your graphics display showing your three fastest speeds

2) (10 points): Demo your program

- Short video preferred
- Photos also work

BlueTooth & Motor Speed:

3) (30 Points): Write a Python program which allows you to control the speed of a DC motor using your cell phone and a bluetooth interface. Some options are:

- Use PWM to vary the speed and direction of the DC motor
- Use commands to set the direction (CW or CCW) and speed (000 to 100)
- Use a long string to input both (+100, -085, etc)

When completed, you should be able to set the voltage to the motor from -100% to +100%

Inlcude:

- Your Python program
- Data showing it is working (CW, CCW, speed or votlage changes with data input)

4) (10 points); Demo your program

- Short video preferred
- Photos also work