**CSEE5590-0005/490-0005**

**IOT / Robot Programming**

**LAB ASSIGNMENT #1**

**Lesson Title:** Smart IOT Monitoring Station using Adafruit Visualization

**Lesson Description:** *Adafruit Visualization of the IOT sensors for professional Looks*

The Lab assignment is based on Smart IOT system that will have the capability of designing the Weather station and Pulse beat monitoring. In order complete this project you will be required to use pulse sensor, Temperature sensor, Light sensor, UV Sensor, Barometer sensor and the dust sensor. Finally all the sensors data should be visualized in the adafruit dashboard as an alternative visualization for ThingSpeak server.

* Make your own configurations for sensor. The safe limit sensor data will blink the green signal Led while the danger should blink the red LED. Both of the LED’s should be installed with every sensor.
* All readings should be displayed on the LCD one after the other
* If there is an alerting situation “Warning message should be displayed on the LCD screen”. For example if the humidity goes up above 70%, the warning message on the LCD should be “Warning: Take Precautionary measures, the humidity is more than 70% now”.
* All sensor data should be read in MIT app inventor
* If there is an alarming situation you should get a notification on your phone using MIT App inventor.
* Adafruit Dashboard should have some good visualization
* The better the visualizations the better the grade.

**Note**: You can use any cloud dashboard visualization of your choice **except ThingSpeak**.