Raspberry pi 3 and MS Azure

Week 1

* Install Raspbian OS

Week 2

* Sensors introduction and setup, GrovePi board, Azure
* Sample services on azure,
* Flow chart of the whole architecture(page 3, pdf for pollution)
* Introduce database and install mysql

Week 3

* Start to utilize the sensors and collect data, install mySQL
* More hands-on activity, python script, collect data from mySQL

Week 4

* Introduce Azure IoT
* Project thoughts and direction: face recognition, monitor traffic flow…
* Introduce Node.js a bit
* Invest more services on the Azure, use case scenario, connect the sensor to pi and to cloud, redo the activity in week3, connect to Azure Iot hub
* Assignment: collect enough data for further progress

Week 5

* Connect multiple sensors and create a dashboard on Azure.

Week 6

* Connect Azure with RP and introduce the service we will use: IoT hub, analysis/database tool and more
* Using Azure face detection to start the final project
* To detect how many people

Week 7

* Demo on using Azure IoT hub and analysis tool on Project
* Create a dashboard for the flow, data visualization here
* Wrap up the previous week lab, provide chart, introduce computer vision and more charts
* Introduce web service, azure facial detection/object detection
* Talk more details about PowerBI

Week 8

* Data visualization on the result of data
* Future improvement and ideas
* Detect age, sex, and so on, more information
* The whole procedure how to use the computer vision on reading license plate number s and show outputs

Week 9

* Final Project wrap up
* More idea of detecting people, like machine learning
* Parse the Json output into database, do analysis on it, connect more REST API.
* Use Web app to stream the output on the web