**Weekly Report/Blog**

**Week 1 October 7-11th 2019**

We’ve meet with the supervisor and we discussed our potential project idea and the supervisor said that to do more research on the area that we are working for the group project.

Our Project idea would be network based camera surveillance systems and car plate recognition. and My area will be installing surveillance camera system and setting up Number plate recognition using API, raspberry pi camera and raspberry pi model 3/3B +. I did a lot of research in installing surveillance camera/webcam server on the raspberry pi which is very doable. The number plate recognition will be tricky as the steps are long but doable if I follow the steps carefully and take my time to go through the steps carefully. There are two ways to set up number plate recognition either with node red or without node red. OpenALPR needs to be installed if I chose either way to install. OpenALPR is an automatic number-plate recognition library written in C++. The software is distributed in both a commercial and open source version and scans the number plates using any cameras and shows the details on the screen. Once the OpenALPR is installed properly on the Pi then

We need a least two raspberry pi one for Camera Surveillance system and another with car plate recognition. We need at least 2 or more raspberry Pi cameras. Raspberry Pi v2 camera module for recognising car plate and webcam or Raspberry Pi V2 cameras for surveillance camera system.

When the camera surveillance is set up then we need to create a website to host the camera live footage then use a cloud services to host the website publicly so that the boss can see the footage while out of work.

**Number Plate Recognition Scenario**

When a car arrives at the gate, the raspberry pi will take a picture and load the picture of the number plate onto the screen and tell the car model, Number Plate, and the person who owns the car. Then the information can go to the Boss phone to notify that this person as arrived at the driveaway/carpark. Pushover API is used to push information from the raspberry pi to the someone’s/boss smartphone/sets notification on the phone.