**README**

Steps to execute various scenarios

1. Run the automation script to install all the required dependencies on all PIs.
2. Activate the venv that was created by the script.

**For Scenario-1 (Traffic Signal)**

1. Run signal\_1.py
2. Once the signal\_1 is up and running, continue to run vehicle\_2.py. The vehicle would react according to the message received from the traffic signal.

**For Scenario-2 (Parking)**

1. Run parking\_3.py.
2. Once parking\_3 is up, run vehicle\_3.py. This will allow the vehicle to move towards parking, check for its status and occupy or move away from the parking slot.

**For Scenario-3 (Vehicle-1 Meets with Accident, Vehicle-7 Sends Signal to RSU-1)**

1. Run vehicle\_1.py
2. This will emulate an accident scenario and the vehicle will be down.
3. Run rsu\_1.py.
4. This will run the rsu, which continuously fetches data from the cloud.
5. Run vehicle\_7.py.
6. Vehicle 7 moves towards the accident spot, reports this to the rsu\_1, which in turn pushes this info to cloud using AWS Lambda. All others RSUs get this information as well.

**For Scenario-4 (Vehicle-8 gets information from RSU-2, changes lanes)**

1. Run rsu\_2.py.
2. It will continuously fetch information from the cloud. It will have received the message that was sent by rsu\_1 about the accident to vehicle\_1.
3. Run vehicle\_8.py
4. Vehicle 8 moves towards RSU-2, upon reaching near it, RSU-2 transmits the signal regarding the accident.
5. Vehicle 8 changes course of journey from the nearby junction and takes a turn.

**For Scenario-5 (RSU-5 informs Ambulance of accident, Ambulance goes to accident spot)**

1. Run rsu\_5.py
2. This will continuously fetch information from the cloud. The accident that happened with vehicle 1 will be received here.
3. Vehicle 10, which is nearby RSU-5 gets the signal, and moves towards the accident spot.

**Communication with other pods**

1. Run rsu\_4.py
2. A drone from Team-3 will fly near one of our RSUs (RSU-4) and report an accident that took place on its path.
3. This accident information is also circulated among all our RSUs through the use of AWS lambdas.