# *Requirements for Cloud*

Description

There are two approaches for outdoor navigation the first approach using GPS to get the robot car location and IMU to get the pose of the robot.

This approach needs Longitude and Latitude to be input from a cloud based web App as the robot needs a goal to reach.

Then the robot navigates itself and uploads its location to cloud, So that the role of the web App on cloud is about verifying the robot location and gives new input data points to be the robot's goal.

Expected input are longitude and latitude numeric data
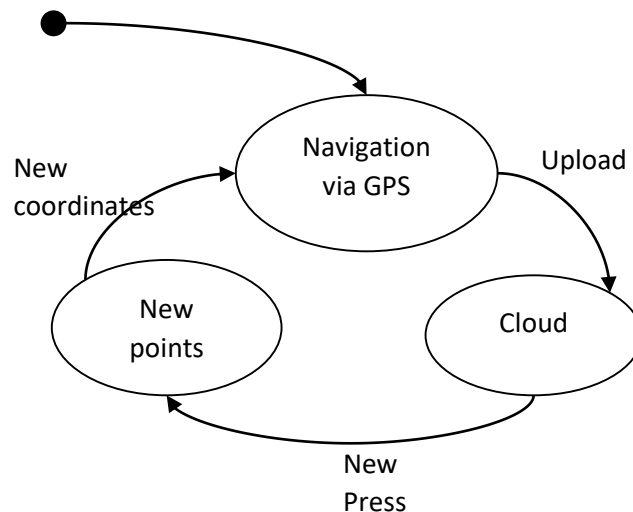
Another Approach for Navigation (get location) without GPS: using google map api's Using internet connection the Raspberry pi can request Geo location from online google map Api's as in the figure.

Where the internet connection can be from WiFi or cellular.
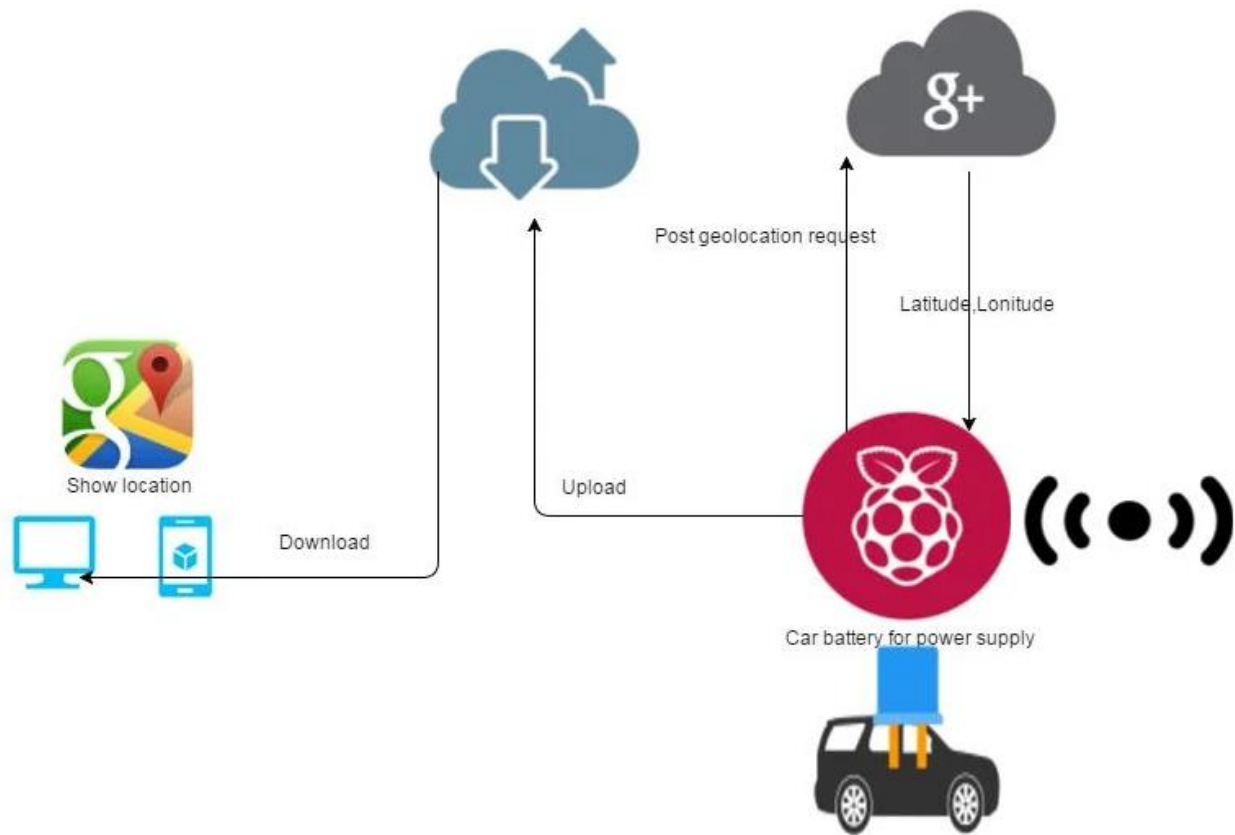
There are many tutorials for the second approach I already found one on instructables where I found the above photo.

References

https://www.instructables.com/id/Raspberry-Pi-Location-Tracker/