Sri Lanka Institute of Information Technology

Project Topic Assessment – 2019

Research Problem:

Day to day busy life style people use their private vehicles to do their work. So that private vehicle usage gets increased. According to that, traffic is also getting increased. Drivers are going their way but they don't know whether the traffic congestion is available or not. So that traffic jams can be seen around the main junctions in the Colombo area. As a 3rd world developing country this will be a big issue.

In Colombo there are huge traffics near main junctions. But sometimes green light is active in that junction and there are no vehicles or a traffic on that route. So it wasting the valuable time of the people. Win VIP vehicle travels, traffic lights are deactivated and the police officer is controlling the traffic during that time. But that time if there is heavy rain, it will be a big trouble for the police officer and it will make a huge traffic too. Also, if an ambulance arrives during the traffic time it has to wait till the traffic reduce. One second can harm to critically sick person's life.

These issues are common problems which we have to face in our day to day lifestyle. If we can find solutions to this issue, it will be valuable for all of us.

Research Area:

ICT and Others.

Solution proposed:

- There are some solutions to reduce traffic. We develop to track how many vehicles are in front of the drivers and after him, as well as we will send a traffic message to drivers.
- Although by using the IR sensor we can count the no of vehicles in specific distance. After that we can give the priority to route that has maximum no of vehicles. Also IR sensors, computer and the traffic light system that made by using raspberry pie are linked together.
- We can provide a mobile device to control the traffic light system to the police officer by creating a mobile application. It will be easy for him to disable the traffic light system in difficult times.
- Also, we place sensors to identify the ambulance sound and the light. So that we can know the route that an ambulance arrive and we can give the priority to that route. After implementing our system we keep all the data in the database about the traffic jam with date, time and location. After a few months we can get more information about the traffic using previously stored data.

Technologies to be used:

Python	Variable resistor
Python IDLE	Java
IR Sensors	PHP
LED with 3 colors	mongo dB
React JS	Node JS
Raspberry pie board	
React Native	
JSON	

Attachment

Solution Proposed :

- The data that interchange between client and server is private and important. Because it gives all the data where client travels. So we have to transfer this data in a secure way.
- As well as we keep all the past data in database for future forecasts. So that we have to keep that data in a very secure and reliable way.

Team Members:

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Acceptable: YES/NO

Changes proposed:

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Any other Comments:

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Approved by CDAP Group:

Member's Name	Signature

Important:

1. According to the comments given by the panel, do the necessary modifications and get the approval by the **same panel**.
2. If the project topic is rejected, find out a new topic and inform the CDAP Group for a new topic pre-assessment.
3. A form approved by the panel must be attached to the **Project Charter Form**.