Prioritizing traffic for Emergency Vehicles and Helping out the Environment.

By: Sheron Suditha Kumarasinghe

Abstract

The following document will apprise knowledge with regards to traffic congestions and its effects to an individual's daily routine. Traffic could become a major hazard at times of emergency such as a scenario where an ambulance needs to get to the closest hospital as soon as possible, or during a criminal car chase. As mentioned above this document will further shed light on how project ReinFlow will give a hand to solve these problems. Furthermore, on how traffic congestions affect the environment.

Introduction

According to the article Urban-real word driving traffic emissions "The emission levels are sensitive to frequency and intensity of acceleration and deceleration, in accordance with the traffic-flow patterns and speed, besides mileages" which states that the emission levels are sensitive when the vehicles keep on accelerating and decelerating constantly along with the traffic flow. Along with this impact on nature, Traffic flow could also be a major affect at times of emergency such as an ambulance rush to the nearest hospital.

As mentioned in the paper "Model Reference Adaptive Control Framework for Real-Time Traffic Management under Emergency Evacuation" explains that trying to get a real time feedback of traffic status and reinforcing it to a system will affect the overall procedure or even save a life. It also claims that there simulations can be done to prevent a real world scenario where an ambulance could be restricted from accessing to the nearest hospital due to a traffic congestion or even an accident on route.

How can project ReinFlow assist?

To begin with, project ReinFlow was initiated by a group of students trying to pursue a healthy routing system overall. The main goal of ReinFlow is to direct traffic on a much efficient way to prevent congestions. Furthermore, even apply to scenarios during emergency or other times of special needs.

With the current functionality, where a respective personal can select two points Starting and Ending and the system will generate the shortest route to the end point turning all the traffic lights green in its generated route, thus this system can be fully automated and reduced to one single click. Such as in a scenario where a patient needs immediate medical assistance, the personal can just click a type of requirement where as, "Immediate Nearest Hospital" with the platforms algorithm it could possibly find the nearest hospital with the least amount of traffic while switching the lights green accordingly.

Solving an Environmental Crisis using ReinFlow.

ReinFlow can also be used to solve the climatic issues that generate due to Traffic Congestions. With vehicles stopping and moving at short amounts of time will cause a significant increase of emission within that time because the vehicle itself must accelerate. ReinFlow can be helpful when switching traffic lights, where it could monitor areas with high levels of congestions and prioritize the lights according to that data. Not to forget, with future iterations ReinFlow will be able to collect Bluetooth data to simulate the traffic levels accordingly.

Conclusion

In conclusion, ReinFlow can be advanced in many ways and with the development of the platform opens a vast amount of opportunities. In a nutshell this following research shows what other improvements can be made to ReinFlow platform for the betterment of it and its overall user experience.

References

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