Maps Using Traffic Data

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Abstract

The rapid growth of urban population and numbers of private cars in this modern era, results in increasingly urgent transportation problem in cities throughout the world. Road traffic congestion is an omnipresent problem, which leads to delays, time loss, human stress, energy consumption and environmental pollution. In order to travel faster, a person would want to take a path which has less traffic congestion and is shorter also. And in order to decrease traffic congestion, there is a need for simulating and optimizing traffic control and improving traffic management.

Our app will be using non real time analysis where traffic congestion will be calculated using mock data. The aim is to reduce the traffic congestion on roads which will lead to decrease in the number of accidents. It can provide important data which can help road traffic management.

Problem Statement

Our BTP project will tackle the problem of finding a suitable path between source and destination which is less congested and shorter as well as decreasing traffic congestion along a path by providing alternate routes to a person, so that the traffic is equally divided among the paths.

We would manage alternate routing and find the least traffic path by calculating traffic index which depends on the following factor:-

- Road Condition of a certain road
- Traffic density at a junction
- Time of the day

Motivation and Scope

Sometimes people not only want to reach their destination in shortest time possible but also through a less congested path whereas sometimes they want to go through a crowded path so that it is safer.

Our app will display multiple paths for a person and so that he can select the route according to his needs. It will also reduce traffic congestion by equally distributing the traffic among the paths which would help in managing traffic more effectively.

Literature Survey

Papers	Authors	Year	Journals
Dynamic road traffic management	Shashikiran, V. Kumar, T.T.S. Kumar, N.S. Venkateswaran, V. Balaji, S.	2011	Recent Trends in Information Technology (ICRTIT)
Smart traffic online system (STOS): Presenting road networks with time-weighted graphs	Halaoui, H.F.	2010	Information Society (i-Society)
Adaptive route selection support system based on road traffic information	Rahman, S. Yeasmin, N. Ahmmed, M.U. Kaiser, M.S.	2015	Electrical Engineering and Information Communication Technology (ICEEICT)

Modularization

S.No.	Modules	Person Responsible	Date
1.	Getting acquainted with Google Maps API	Both	Done
2.	Learning Java language	Both	In progress
3.	Getting the multiple paths b/w source and destination	Rishabh	10 March
4.	Highlighting the paths a/c to needs	Manish	10 March
5.	Generating alternate routes for a path and finding least traffic path	Rishabh	25 March
6.	Building UI and showing relevant data	Manish	25 March
7.	Validating and Verifying the program	Both	10 April

Deliverables

At the end of the project, we propose to develop an app that will be able to show a Google map containing multiple paths from source and destination. User can select any of the path according to his needs.

Least traffic path will be shown considering traffic congestion. It will help in reducing the traffic congestion by distributing the traffic among multiple routes.