SMART PEER CAR POOLING SYSTEM

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ABSTRACT:

Increase in college population results in insufficient transportation facilities. Staffs and students prefer to use their own vehicle to commute to college rather using an alternative method. This leads to problems like increasing number of vehicles, traffic, parking problems, fuel combustion etc. Smart Peer Car Pooling System can be used, in which people travelling from nearby source can share the ride to college. Smart Peer Car Pooling System can be a solution for the given problems. It is an effective means of reducing traffic congestion, waiting time, wastage of resources and fuel consumption. Governments and institutions encourage carpooling to increase high-occupancy vehicle lanes rather than commuters. The proposed system a smart model for Smart Peer Carpooling System will be introduced which is both architecture and business model approaches tested to for the system based on sustainable mobility.

Keywords: Genetic Algorithm , Carpooling , Google Maps , Real-Time Tracking.

1 Introduction

It is an interesting investigation on what car-use reduction measures are perceived by households to be feasible to reduce car driving. The Carpooling is not a new concept in the field of car sharing. Decades ago during oil crises in Europe, people were encouraged to share their vehicles. The study proposed in this paper deals with road transport, whose main two topics are: Transport for the trading sectors and moving of materials, known as freight transport, i.e. logistics & distribution; Transport for non trading sectors and moving of passengers. Carpooling tries to reduce the cost of journey for travellers who commute to work daily which not only will save their pocket but will also reduce the usage of most important non-renewable resource we have i.e. fuel, which is declining at rapid pace. Our project is just an effort to make these two ends meet drivers and passengers and build a bond of trust for their own sake and do a bit of favour to the environment being an educated and responsible citizen. Due to increased in economic development in recent times rates of industrialization and globalization increased.

2 Existing System

Many carpool service systems have been proposed which can be divided into two broad categories based on their features. The first of these comprises systems which are web-based and which transmit carpool information to an online community platform. One such system is Carpool Global which supplies an interfacing service for willing drivers and passengers. In addition, ShareYourRide supplies a GIS-based routing service.

2.1 Drawbacks

Scalability limitations in terms of network bandwidth and server loading. Cannot able maintain best shortest path to the destination .Less data sharing accuracy. High data transfer time. Congestion may occur. Data transmission scheduling not made by data traffic.

2.2 Proposed System

Our proposed system incorporates Shortest path computation with pool share and communication technology with GIS to create a carpool service which is operable in real time. Subsequently, users can instantly submit carpool requests to the intelligent carpool system which reflect their current locations via the use of smart, handheld, communication devices which feature GPS capabilities. The system will use the carpool matching algorithm to generate and return match results within a

short amount of time. GENETIC Based Carpooling, which is an application of car-sharing (also called lift-sharing or ride-sharing) in which drivers (alone-riders) who are travelling to work alone can ask for fellow passengers through our application.

2.3 ADVANTAGES

The server periodically updates the travel/ Passenger details and times on these paths based on the latest traffic, and reports the current best path to the corresponding user. Efficiently maintains the index for live traffic circumstances. Low communication time between sender and receiver. Data transfer rate is high with minimal time. High security and safety journey for passenger with minimum fare amount.

3. Module Description

Multiple peer simulation Module Driver Module Sharing-based nearest passenger query visualization Module Online Route API Module

4. System Testing

Testing is a critical aspect that is done to ensure that the software works according to the requirements or the expectations. Testing is process that is done with an intention to find undiscovered errors. The basic goal of the software development process is to produce software that has no errors soon after they are introduced.

5. Design and implementation

After having the user acceptance of the new system developed, the implementation phase begins. Implementation is the stage of a project during which theory is turned into practice. During this phase, all the programs of the system are loaded onto the user's computer. After loading the system, training of the users starts. After the users are trained about the computerized system, manual working has to shift from manual to computerized working.
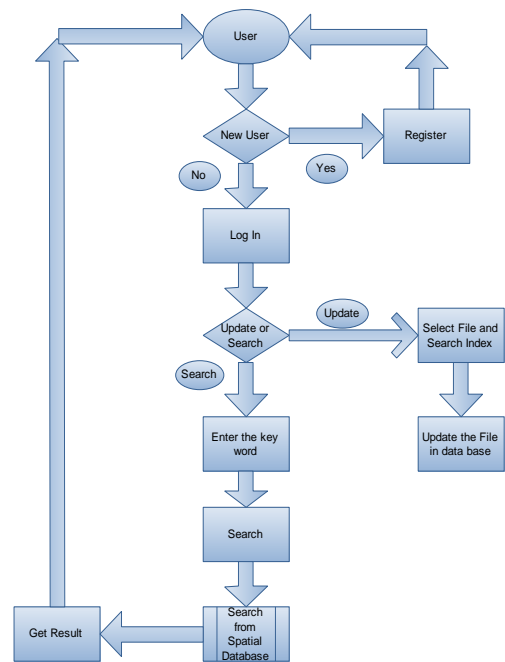
6. CONCLUSION

Carpooling system is an effort to reduce consumption of fuel, our most important non-renewable resource and traffic congestion on roads by encouraging people to use car sharing. So it is an environment-friendly social application and also helps people to reduce their journey time

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