COMFORT RIDE FOR THE COMMUTERS USING SHARED PUBLIC TRANSPORT SYSTEM

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Abstract

Passenger comfort is essential in taxi cab business to retain commuters. Existing system solutions are typically based on offline data collected by manual investigations, which are often dated and may involve stranger problems that reduce the comfort of the passengers. The system use a model that infer passenger arriving moments by interactions of vacant taxicabs and then infer passenger demand by customized online training with both historical and real-time data. The system also consider passenger security in addition to comfort based on the location and timing preferences provided by the rider during their travel. It provides better quality of service to the passengers and overcomes all the real-time problems and privacy issues. It is used to dispatch vacant taxicabs to achieve an equilibrium between passenger demand and taxicab supply across urban regions which will ensure a more comfortable ride to the user with the use of the technology.

KEYWORDS: *Commuters, security, SaRG queries, ridesharing, proposal, Dial-a-Ride Problem.*

I. INTRODUCTION

Today, there is a remarkable increase in the amount of people travelling worldwide. But at the same time the number of unoccupied seats and passenger insecurity is increasing day by day. Ride sharing is a way to avoid the unoccupied seats which must be accompanied by security for comfort ride of the passenger. Among the different categories of ride sharing the system employee here a centralized ridesharing approach to transfer request from the commuter to the driver to ensure and confirm the ride. According to a report if people carry a shared ride the traffic will be potentially reduced to 40% than usual. If this shared ride is even secure then the ride will also minimize the various problems around the society. The system imposes security.

II. RELATED WORK

In [1] the system impose a social aware ride sharing technique to reduce the number of unoccupied seats and increase the number of customers in regular and peak hours.It increases the number of passengers. In [2] the system formally define dynamic ride-sharing and provide challenges like optimizing which develop the technology for the system to support shared ride. The system encourages transportation related research and logistics community in this elating, emergent area of public facility system. In [3] with the Dial-a-Ride Problem (DARP) passengers can stipulate and transfer requests in between source and the final destiny to be provided by service providing vehicle. In the DARP, requests from the passengers are gathered throughout the day and the goal is to accept element many requests as realizable while rewarding operational confinement. In order to manage spatial data expeditiously, as required in machine aided design and geo-data usage, a new database scheme needs an index mechanism that service it to gather the information of the items easily and efficiently according to their spatial locations However, traditional indexing methods are not well suited to data objects of non-zero size situated multidimensional spaces .In [4] it introduces and studies the supreme k-plex problem, which rise in social system investigation, but can also be used in various other important application areas, including wireless system, intercommunications, and graph-based data production. The system found NP-completeness of the conclusion variant of the problem on arbitrary graphs.

III. PROPOSED SYSTEM

In the proposed model, the system provide trust to the commuters by using security through the availability of passenger details to avoid strangers. Here it employee security by identifying the gender of the commuter using aadhar proof of the rider. The rider can choose their preference using the proof of the passenger travelling in the taxi. In this proposed model the system implement safety to especially female rider to avoid various problems faced by the women travelling today. By getting the detail of the travel and the aspect of the person beside them will make their journey safe and secure. For a travel who is alone this would be a great protected journey in today's world. These simple constraints would make the model more efficient for real-time ridesharing systems. A centralized ride sharing approach is implemented with help of service provider. Various optimization factors are considered to make a comfort ride to the passenger engaging in the journey.

IV. SYSTEM ARCHITECTURE

Mainly there are three modules that enhance the project to withstand in this modern society,

1) Driver
2) Service provider
3) Rider

Driver:

Initially the main job of the driver is to register his/her own details like vehicle number, license number. The total number of seats and occupied seat details are submitted and the occupied rider details should be submitted by the driver. The driver should submit the date of journey, departure from and destination area. After submitting the details the driver can always get request from the customer to reach the destination from the source by using shared ride.

Service Provider:

The main mission of the service provider is to check the proposal of both the driver and the rider. If both the details are matched the service provider will send the confirmation mail to the rider. After the rider acceptance of the journey, it will send the time and location to pick up the rider.

Rider:

The foremost task of the rider is to sign up the website. The rider should enrol their name and submit the proof. The proof is mandatory to verify the gender of commuters. The rider should submit the departure from and destination area. After the service provider process, the main work of the rider is to confirm his/her acceptance through mail. If the mail is confirmed then the ride is assured with safety measures. This reduces the fear of the rider of the stranger and provides a more comfortable and secure ride.

The system module undergoes four process that enhance the efficiency of the proposed system into the next level. The four process are,

1) Authentication
2) Process request
3) Request analysis
4) Process confirmation

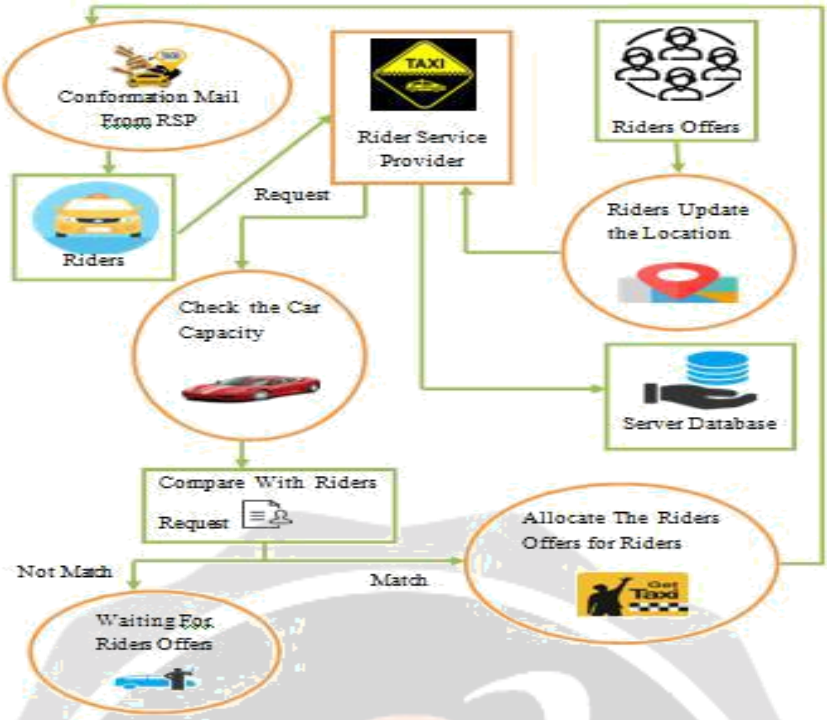

FIG 1. SYSTEM ARCHITECTURE

V. RESULT AND OUTCOME

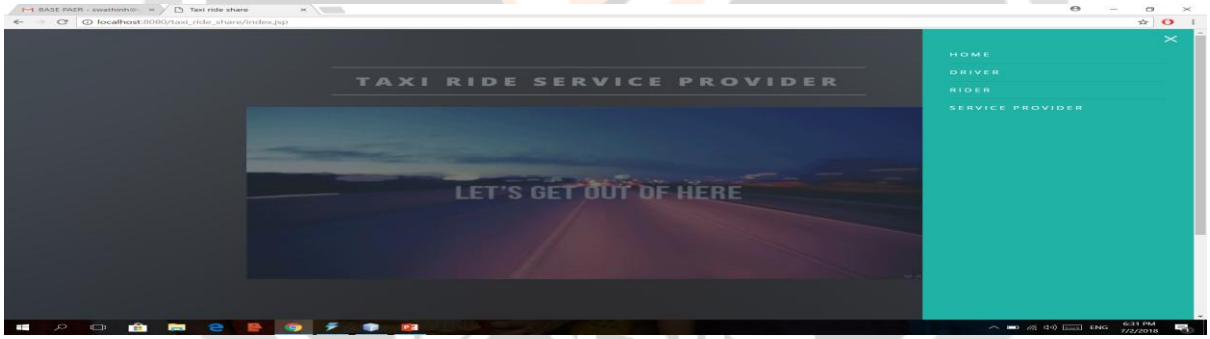

FIG 2:MENU

Fig 2 depicts the details involved and the tab to go the register page for all the users involving rider and driver.

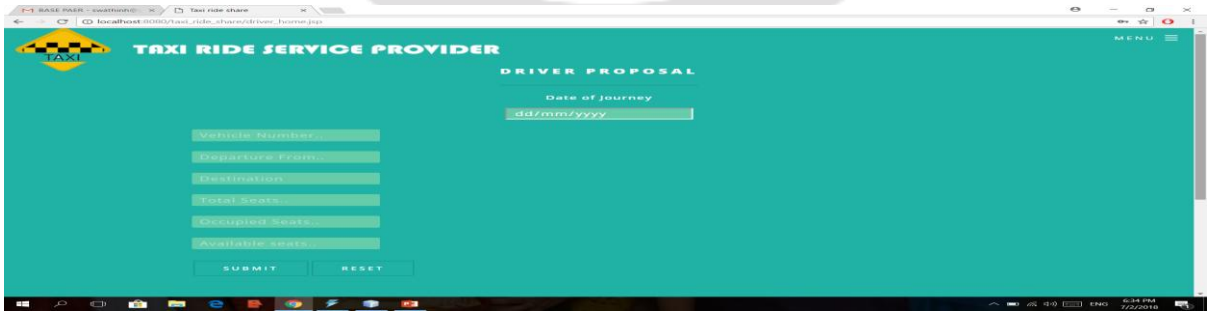

FIG 3:DRIVER PROPOSAL

Fig 3 depicts the number of occupied and unoccupied seats and the source and destination of the journey of the ride.

Algorithm:

A Branch and Bound algorithm for minimizing the problem hence consists of three main components:

1. a bounding function providing for a given subspace of the solution space a lower bound for the best solution value obtainable in the subspace.
2. a strategy for selecting the live solution subspace to be investigated in the current iteration.
3. a branching rule to be applied if a subspace after investigation cannot be discarded, hereby subdividing the subspace.

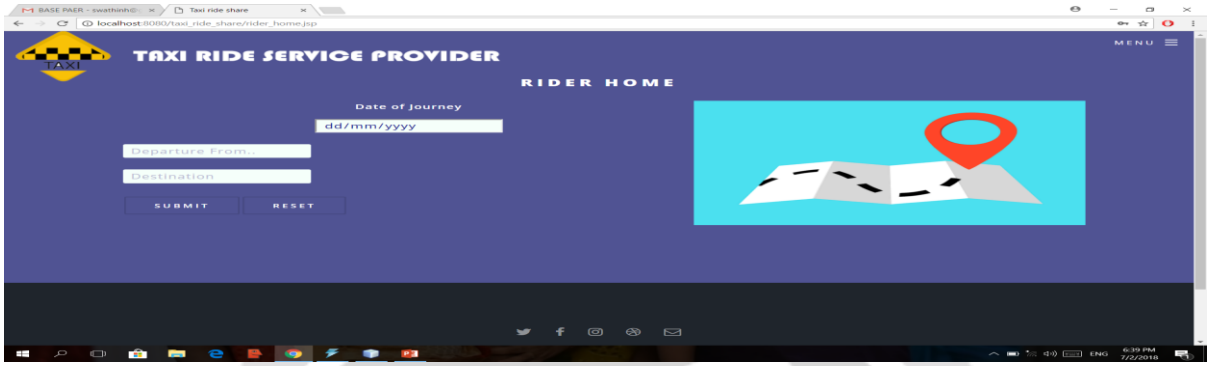

FIG 4: RIDER PAGE

Fig 4 involves the journey details of the rider to be submitted to the service provider for confirmation.

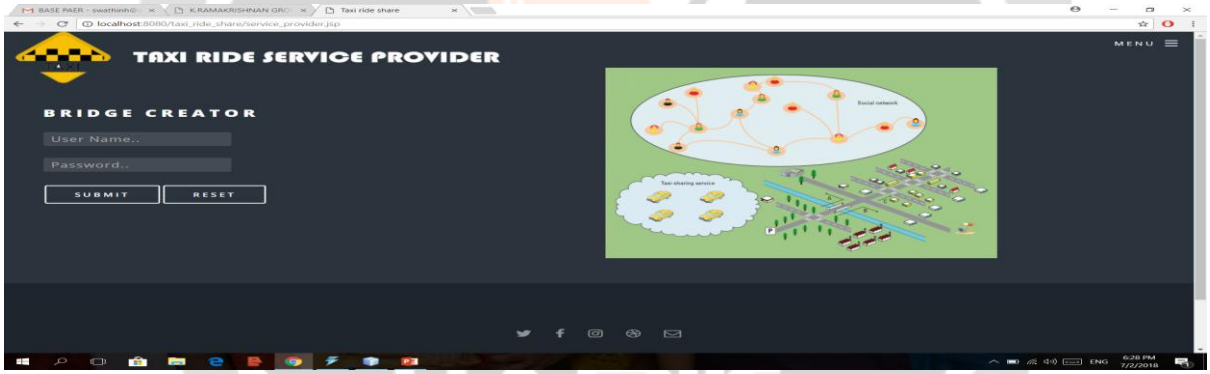

FIG 5: SERVICE PROVIDER PAGE

Fig 5 involves the accceptance of each proposal of the rider.

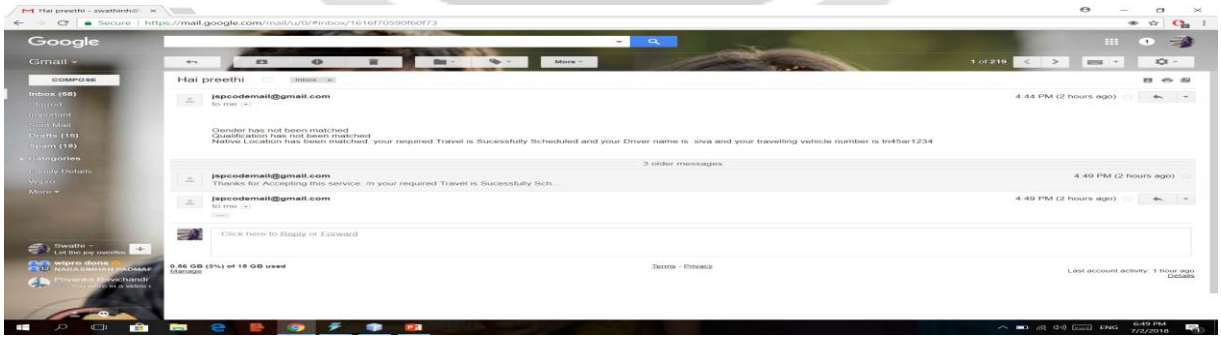

FIG 6: RESPONSE MAIL

Fig 6 depicts the response to the rider regarding the confirmation of the ride.

VI. CONCLUSION AND FUTURE WORK

In the proposed paper, social ride sharing for metropolitan cities is suggested. The main intention is to build the framework to use social discomfort and safety concerns when travelling with strangers. Thus, the system considers to system that matches the rider preferences for gender. Thus, the proposed system assures more security to the user than any other existing system. It may also help to reduce the traffic congestion. The system have introduced a new practical type of SaRG queries that solves the ride sharing problem. The SaRG query retrieve a ride sharing group where each riders trip to alike to that of the driver and each associate of the ride sharing group should be recognizable with at least k addition group members. The proposed will increase the number of passengers.

In future, complete the acceptance tests are planned to be performed. As for future work on following three extensions initially the system intent to investigate weighted relation in our SaRG queries. Then, planning to design more personalized ride request in our rides sharing system to make our proposed SaRG queries more practical. Finally, in some cases how to design an efficient approximation algorithm with a tight approximation bound is also our future cases.

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