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A REVIEW REAL TIME SMART RIDE POOLING AND RIDE SHARING SYSTEM USING ANDROID APPLICATION

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ABSTRACT

Ride sharing, also known as Ride- pooling, ride-sharing, and lift-sharing, is the practice of sharing Ride rides so that many people can travel in the same vehicle. People all around the country, particularly in major centers, are now experiencing traffic problems as a result of the massive rise in vehicle numbers on the road, which has added an hour or more to their daily commute time. Sharing travels minimizes Rid ebon emissions, traffic congestion on the roads, and the demand for parking places, making Ride Sharing a more ecologically friendly and sustainable mode of transportation. This study provides an overview of the various Ride Sharing approaches employed by the researchers. An abstract depiction of the proposed system that we will develop enables its users to share automobiles in a safe and secure manner.

Keywords: Ride Sharing, Ride Sharing, Mobile Communication Systems, Android, Ride-Sharing, GPS Navigation, Ride-Seeker.

I. INTRODUCTION

The number of automobiles on the road has increased by a few percentage points each year as a result of population expansion and growing population density, particularly in metropolitan regions. In the world of automobile sharing, Ride Sharing is not a novel notion. People were urged to share their autos during Europe's oil problems decades ago. Ride Sharing aims to lower the cost of travel for commuters who go to work on a regular basis, which not only saves money but also reduces the use of the most significant nonrenewable resource we have, namely gasoline, which is rapidly depleting. Ride Sharing is widely used for commuting, but it is also becoming more popular for longer one-time trips, with the formality and regularity of arrangements differing between schemes and destinations. These days, there is a significant traffic problem on the roadways, and rising gasoline prices are exacerbating the situation. Additionally, automobile use contributes to pollution, which has negative consequences for our ecosystem. Ride sharing is a solution to these problems, but it might raise concerns about security and trust. A mobile- based Ride Share system is one solution to this challenge. Users of the Ride Share system would be able to share automobiles in a safe and secure manner. This might include both small everyday travel inside the city, such as having to church, and longer inter-city journeys. The Ride Share application is not susceptible because it was not able to fulfill the requirements which are listed below:-

- Cannot be used on other operating systems.
- More Expensive.
- Security issues.

II. LITERATURE REVIEW

Mayur K. Thorat and Rahul M. Lahakare [1] have presented an overview of the Ride Sharing system with SMS warnings, focusing on how to overcome challenges that have arisen in the past and how to make it more safe. They proposed that it be used both for inter-city and intra-city transport. They attempted to broaden their user base to include blind persons, who can utilise voice recognition technology to pinpoint their exact position at any given time.

R. Manzini and A. Pareschi [2] have developed a decision-making framework for the use of Ride Sharing. This information will be utilised to assist travellers in deciding which Rides to take. Swati is Swati's middle name. R. Tare, Neha B. Khalate, and Ajita A. Mahapadi [3] helped by recommending ways to make this app more user-friendly for passengers as well as drivers. They focused on the real-time system's dependability and the safety of female travellers in particular.

The largest long-distance ridesharing community in the world is BlaBlaRide [4]. BlaBlaRide was created in

2006 and was created in December 2003 by FrédéricMazzella. It links drivers and riders eager to travel together between cities and split the cost of the journey. BlaBlaRide is a social media platform with over 20 million users in 19

countries. [three] Members must register and build a personal web profile, which contains ratings and reviews from other members, as well as social members demonstrating how much experience they have with the service, implying that those with more-known as "ambassadors" - attract more ride sharing. One of this app's big flaws is that it only provides inter-city Ridesharing possibilities, which our app attempts to address by adding intra- city commuting alternatives as well.

FolksVagn is a community-based system that connects individuals who want to share rides. While customers receive rides for a fraction of the cost of a traditional taxi, the Ride owner receives a portion of the payment. It is only available to business clients since registration requires a business email address and payment is made through a prepaid account or an online wallet system.

To pay for the ride, there is a system in place. The well-known taxi-hire application “taxi for sure” [5] for the Android platform was the first Ridesharing app to enable Ride Sharing for “Vacationers.” Those who are on vacation and wish to spend less time travelling in order to save money. They launched it for a few specific routes exclusively, such as "Chandigarh-Delhi," "Mysore-Manali," and so on, and they want to expand to the masses in the near future.

III. PROPOSED SYSTEM

1. Login

Because all of the actions that may be performed with the app require all three users to be logged in, they may utilise the login forms by inputting their appropriate credentials (User name and password).

Rider: A rider is someone who owns a Journey/bike and needs to go from one location to another. He or she posts his or her journey on the app in order to find people to share the ride with.

2. Ride Scheduling

The rider can schedule two types of the rides a) Regular rides and b) Frequent rides;

a) Regular Rides

i) Create new regular ride:

- When passengers search for rides, the rider can create a new ride that will be listed. The application will ask for details about the regular journey, including the destination, origin, meeting location, departure time/date, projected arrival time, and travel preferences.
- The rider posts this information after submitting it in order to locate passengers.

ii) Check-in journey

- When the rider or passenger arrives at the agreed-upon meeting location at the agreed-upon time, he or she can check-in.
- The GPS devices of the users are used to guarantee that they arrive on time at the meeting location.

b) Frequent Rides

Frequent trips are trips that occur on a weekly basis.

i) Add frequent ride

- In addition to the frequency, the rider may design a frequent trip that includes the origin and destination, departure and return times (daily and weekly).

3. Get Paid for Rides in Which You have Offered The passenger will be responsible for the cost of the ride. The passenger may also receive special incentives, such as payment at the end of the month.

Passenger:

Any individual who does not own a Ride but wishes to join a rider as a passenger is referred to as a passenger. The traveler has signed a document acknowledging that he or she has read and understands all of the terms and conditions (price and general behavior).

a. Find Trip:

When a passenger is looking for a ride to a certain location, he may utilised a search form that asks for the destination, origin, and departure date/time. In addition, he has the option of specifying his travel preferences.

i) Look for scheduled rides and make a reservation

When a passenger is looking for a ride to a certain location, he can utilised a search form that asks for the destination, origin, and departure date/time. In addition, he has the option of specifying his travel preferences. When he finds a route that he likes, he can quickly reserve a seat, and the app will notify the rider that a passenger has secured a seat.

ii) Look for rides that are available on a regular basis.

A passenger might look for a regularly scheduled ride and join it. The passenger should provide information on the departing neighborhood, destination, departure hours, and frequency. It will be attempted by the program me to match it with the most appropriate journey. If the passenger is happy, he can sign up for the frequent riding program me.

a. Choose a bike or a ride: Choose a vehicle type based on the number of passengers who have made a request. A bike or a Ride can be used as the mode of transportation.

b. Pick a Ride: When he finds a journey that suits him, he may quickly reserve a seat, and the app will notify the rider that a passenger has reserved.

c. Pay for Ride: The passenger will pay for the ride since the money will be deducted automatically at the beginning of the journey.

Admin:-

Admin: a. Reports on payments

The admin will be able to see and manage the history of payment transactions.

a. Details about current journeys.

The administrator can keep track of all of the rides and excursions that are currently booked.

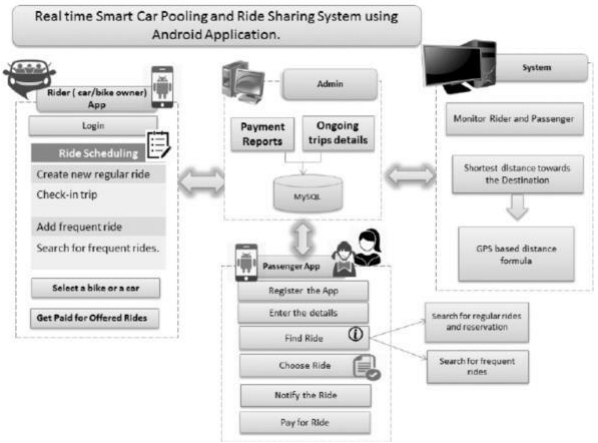

Figure 1. Proposed System Architecture.

IV. CONCLUSION

In this article, the Ride Sharing system is described as an effort to encourage people to adopt Ridesharing in order to minimise the use of petroleum, our most significant nonrenewable resource, and traffic congestion on highways. As a result, it is an environmentally friendly social application that also assists individuals in reducing their travel time. The literature review of different scholars on the Ride Sharing system is addressed in this study. Ride Sharing may be done in a variety of ways, including via SMS alerts, GPS monitoring, and other methods.

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