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VISHWA-CONNECT: A Ride Sharing Mobile Application for Campus Students

Kaushalya Thopate[1], Mahesh Sathe[2], Saurav Gujar[3], Sarthak Honmute[4], Pushkraj Savji[5], Vinayak Sawandkar[6], Satvik Vishnoi[7]

[1, 2, 3, 4,5, 6, 7]*Department of Engineering, Sciences and Humanities (DESH) Vishwakarma Institute of Technology, Pune, 411037, Maharashtra, India*

Abstract: ***Being a student travelling becomes more and more necessary and also being a student not everyone is provided with a private vehicle to travel so we tend to use public transportation as a means to travel , but not every time it is convenient to travel by public transportation ,at times we need to ask our friends and colleague to drop us or we need their help but it is not useful every time .For that reason we are presenting this project which will help students to travel short distances with a ride sharing feature that will automatically turns a ride into a affordable ride.***

Keywords: Carpooling App , Ride-sharing, Students, Travelling.

I. INTRODUCTION

Ride-sharing aims to minimize negative impacts related to emissions, reduce travelling costs and congestion, and increase passenger vehicle occupancy and public transit ridership. Carpooling offers many benefits such as Carpooling will save money, Carpooling allows you to share the cost of gas and parking, cutting your expenses by nearly 50% or more; the more customers that use your carpool the more you save money. Carpooling is also socially economical. Not only will you be saving money but also you will help to reduce the costs that we pay for road maintenance, construction of new roads and air pollution related health costs . In short Carpooling is beneficial for the environment. The less cars on the roads the less Greenhouse Gas (GHG) will be emitted and the air quality will improve automatically.

According to medical reports, air pollution causes number of health issues which includes respiratory diseases, cardiovascular disease, allergies and neurological effects. Thus Carpooling reduces health risks of yours as well as everyone else. Research also suggests that carpooling is less stressful than travelling alone. Carpooling is affordable as compared to driving alone. Hence it is cost saving too. Carpooling offers a sharing option that works better than other methods of transportation. Carpooling is best option for people who live such areas where means of transportation are less .In short, Carpooling is a great way to travel. Also it has more benefits. Also provide more comfortable and time saving way to travel. Ride sharing also leads to lesser pollution. It is best for college students/employees to travel [1].

II. LITERATURE SURVEY

Commuters can spontaneously form groups to split the expense of their transportation by ride-sharing or carpooling. This is now a well-liked style in the new sharing paradigm economy. The matching system that matches together suitable commuters is an essential part of effective ride-sharing. Traditionally, matching has been carried out centrally, with an operator setting up ride-sharing in accordance with a broad goal (e.g., total cost of all commuters). Ride-sharing, on the other hand, is a decentralised model for making decisions in which commuters are self-interested and only encouraged to cooperate based on individual payments. In particular, it is unclear how commuters' transportation costs should be divided fairly and what effects cost-sharing would have on decentralised ride-sharing. This study clarifies the fundamentals of decentralised ride-sharing and car pooling systems based on stable matching, demonstrating that no one would benefit from deviating from a stable matching result [2].

Many university staff members, students are having trouble in locating parking places due to the excessive number of cars visiting university campuses and lack of available parking spaces. It is a common problem that affects the majority of university campuses throughout the world. A feasible solution to this issue is thought to be carpooling or ride-sharing. The recommendation to share rides will reduce the number of cars on college campuses, which will improve parking spaces issues, also it is cost saving for students and reduce fuel emissions for cleaner and healthier environment too. In order to address this urgent problem on many campuses, the creation of a campus ride-sharing smartphone application will be a good medium for university personnel and students [3].

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The majority of existing ride-sharing services rely on a central third to organize the service. This makes them subject to single point of failure and privacy concerns by both internal and external attackers. This paper gives public blockchain based ride sharing service named B-ride which offers ride sharing services independent of third party [4].

Car pooling or ride sharing applications have become feasible due to advances in mobile technology. There is a need to enable communication between riders and drivers by keeping their personal details secure. This paper provides a solution named VoIP, which provides a platform for a voice calls between drivers and riders by hiding their mobile number that is secure too [5].

A real-time demand-aware ridesharing service is developed , which aims to give the quality-of-service .When users submit a request in devices, it will find a car on the user's way only . It is also made to find the most appropriate route. [6].

This paper studies the problem of distributed route matching over road network. To send tasks to different servers , we had created a random server selection algorithm. We had made a novel index to maintain tasks in every server. Last of all, we discuss how to execute tasks matching over road network. [7].

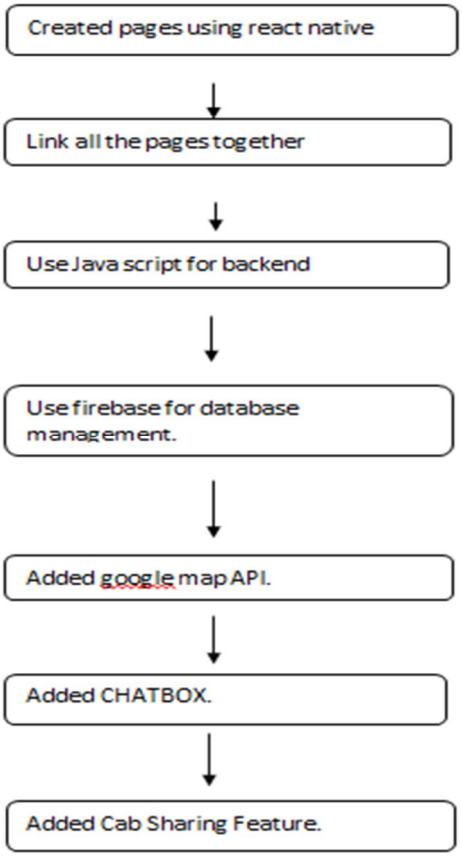
We have created a platform which gives hierarchical variation of the geographical region using grids, landmarks, etc. which helps to eliminate shortest path in real time world [8].

This platform uses information of taxis and ride requests to get efficient sequence of taxis requests and better passenger–taxi matching,. It uses of both geographical information and travel directions to match taxis and ride requests and provides the shortest path. It also gives a novel payment model to share the ridesharing benefits among the taxi driver and passengers. [9].

III. TOOLS AND TECHNOLOGY

1) React native
2) JavaScript
3) Firebase
4) VS Code

IV. METHODOLOGY



V. RESULTS

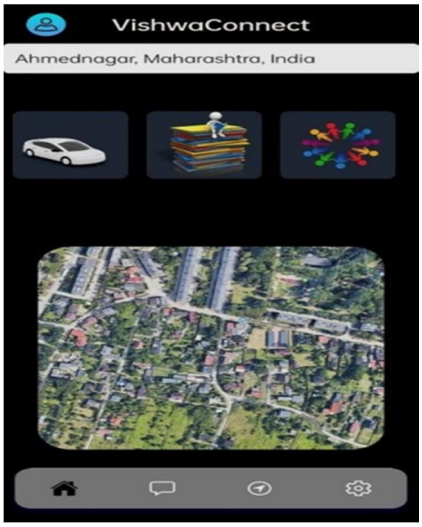


Fig. 1 Home Screen

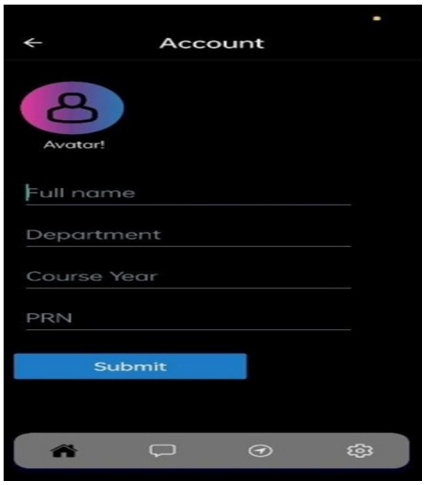


Fig. 2 Profile Section



Fig. 3 Chat Box

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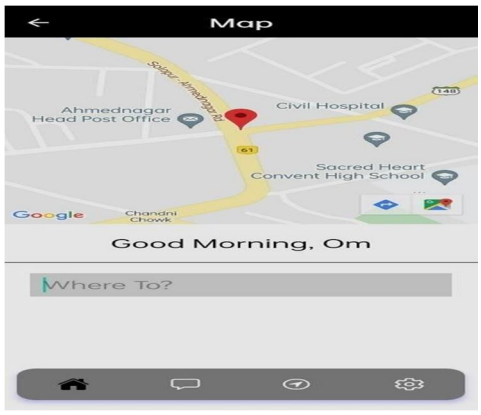


Fig. 4 Map Section

VI. GRAPH

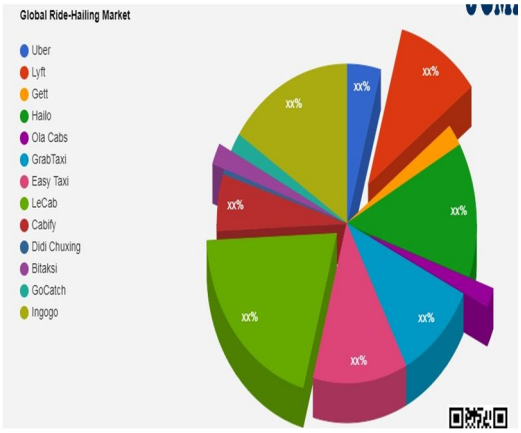


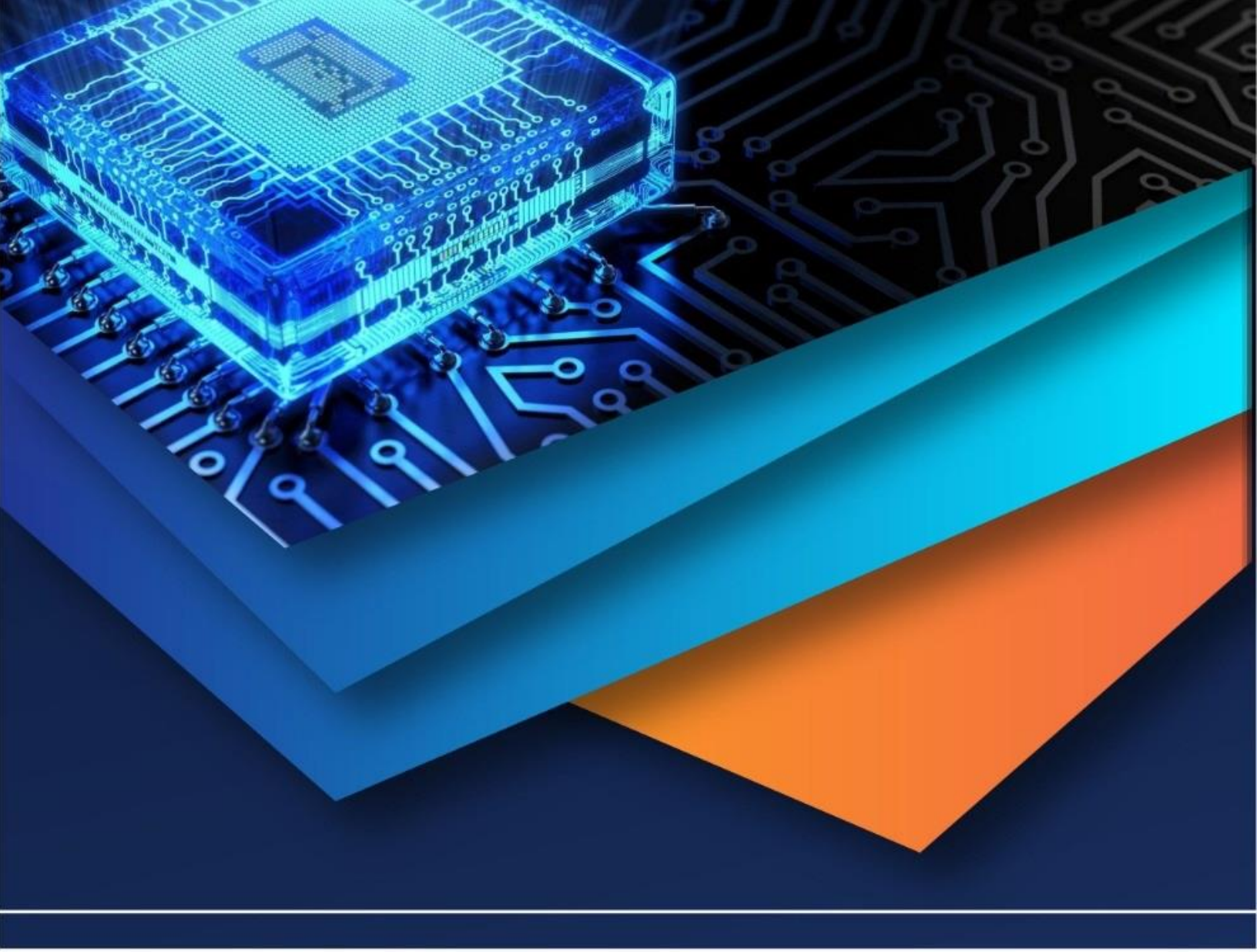
Fig. 5 Global Ride-hailing market [10]

VII. CONCLUSION

This Application provides an efficient ride sharing option which ultimately saves expenditure on travelling and can also help fuel saving indirectly reducing pollution. As this mainly focuses on campus/college students it may also grow communication between students. In this way, this application is the best solution for ride sharing.

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