International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 06 Issue: 03 | March - 2022 ISSN: 2582-3930

Ride With Us: Vehicle Pooling Web Application

Mr. Manthan Gaikwad[1], Miss. Sai Apte[2], Mr. Gaurav Dhongade[3], Mr. Sareen Deore[4]

[1] *Student, Dept. Information and Technology, A. C. Patil college of engineering, Maharashtra, India*
[2] *Student, Dept. Information and Technology, A. C. Patil college of engineering, Maharashtra, India*
[3] *Student, Dept. Information and Technology, A. C. Patil college of engineering, Maharashtra, India*
[4] *Professor, Dept. Information and Technology, A. C. Patil college of engineering, Maharashtra, India*

Abstract - From a few years the extent of pollutants exquisite growing and a few capabilities in automobiles has a totally awful effect on surroundings. The automobiles exhaust carbon dioxide (CO2) fuel line and growing the air pollutants in addition to the sound of the horns and automobiles produce noise pollutants. In the twenty first century the usage of automobiles extended daily that's why we are able to face the trouble of site visitors extra use of herbal sources to run the automobiles. So, at some point all of the sources we misplaced them. This trouble has one answer is to pool the automobiles and put into effect it we are able to introducing the automobile pooling machine through adopting this software consumer can lessen everyone travels expenses which include gasoline cost, parking space, tolls and strain of driving. Vehicle pooling is extra appropriate particularly throughout excessive gasoline fees and excessive pollutants periods. Vehicle pooling is a web-primarily based totally software that offer extra protection and clean to manner to discover a automobile for journey. Steps to lessen unwell results of personal automobiles are extraordinarily vital now-a-days. So, a few new facility or offerings must be advanced to offer a snug and dependable provider to customers and to lessen dangerous results on surroundings like pollutants, congestion etc. Ride sharing is one of the rising technologies followed all around the world, wherein customers with equal origin-vacation spot and time of tour are matched and that they proportion the trip. Different methods, algorithms or fashions designed to offer trip sharing is summarized on this paper and what modifications must be made in conventional trip sharing provider is defined with methodology.

Key Words: CO_2, emerging, methodology, hazardous effects, Congestion, excess.

1.INTRODUCTION

With this online carpooling system, the user receives a pickup time, a detail of the arriving vehicle and driver. At the destination, the person pays automatically. from car tour for a couple of man or woman to tour in a single automobile and avoids the want for others to force to a vicinity themselves.

By permitting extra human beings to percentage a car, carpooling reduces every man or woman's tour expenses, along with tolls and the strain of driving. Carpooling is likewise a greener and extra sustainable manner to tour, as ridesharing reduces air pollutants, carbon emissions, street congestion and the want for parking. specifically, in instances of excessive pollutants or excessive gasoline prices. Ride-sharing is an extremely good manner to apply a car's complete seating ability that might in any other case move unused if most effective the driving force had been the use of the automobile. Carpooling is extra famous with those who paintings in locations with extra jobs close by and stay in locations with better residential densities.

1.1Existing System

The online car collection system is a emerging condition that provides comfortable and consistent travel for both the user and the car owner, using this application within the city can be difficult. All existing systems have very attractive and new connections that help the user to understand the system easily.

These systems work well and are very well done with the various resources available. But the problem with existing systems is that they do not provide a component that builds trust between the passengers he travels with. The reason is that all available resources focus only on the physical properties of the system.

Disadvantages:

- No interaction components available.
- Don't know with whom you are travelling with.
- Not track the location.
- Not Flexible.

2. Literature Survey

1) Govind Yatnalkar (2020) published a paper for the 3rd National Emerging Data Conference in which they specified an advanced carpooling model based on human characteristics and machine learning suggestion system.

Project explanation:

Our research began with an in-depth examination of a few popular Ride Sharing applications Uber Pool, LyftLine, Curb, Wingz, Via. One of the most common limitations and reasons for conflict seen in all applications is that drivers know the number of passengers in the transit area, and in most trips, the car has only one passenger, which is completely contrary to the context of sharing. Additional restrictions include users who do not have the basic information of other users, incorrect rates, and sudden additions of passengers, which adds a significant amount of time to complete the trip due to remote locations. By recognizing the limitations in operating systems, we designed our model taking into account most of the limitations found. At the same time, we first created an Exact match, which features passengers with exactly the same features. If the pool is incomplete, we find passengers with a slightly different or adjacent feature. If the pool remains incomplete, we include the current Uber or Lyft model for the same riders regardless of features. Once we have the details of all the passengers, we provide a travel plan for every passenger, including the driver, before starting the trip, which helps to reduce public barriers between passengers.

2) Carpooling based primarily on Drivers ' Trajectories and Passengers' Needs. Author: FuShiung Hsieh.

Project explanation:

The goal of carpooling is to lessen the wide variety of vehicles in use via way of means of grouping people. By taking advantage of the carpooling model, it can significantly reduce traffic congestion, gas consumption, air pollution, parking needs and travel costs. This paper targets to expand a prototype carpooling device to suit passengers and drivers primarily based totally on their trajectories. We advise a heuristic technique to resolve the carpooling problem. In our approach, we first collect information on the trajectory of passengers and drivers. We then advise an identical set of rules to assign passengers to drivers 'vehicles primarily based totally on their trajectories. The carpooling device proposed on this take a look at combines an identical set of rules, this is perfectly included with the Google Maps API, dynamic web pages and database device. We additionally behavior experiments to demonstrate our proposed technique.

3) Smart Peer Car Pooling System Auteurs: Raza Hasan, Abdul Hadi Bhatti, Mohammad Sohail Hayat, Haftamu Menke Gebreyohannes Syed Imran Ali, Abeer Javed Syed.

Project explanation:

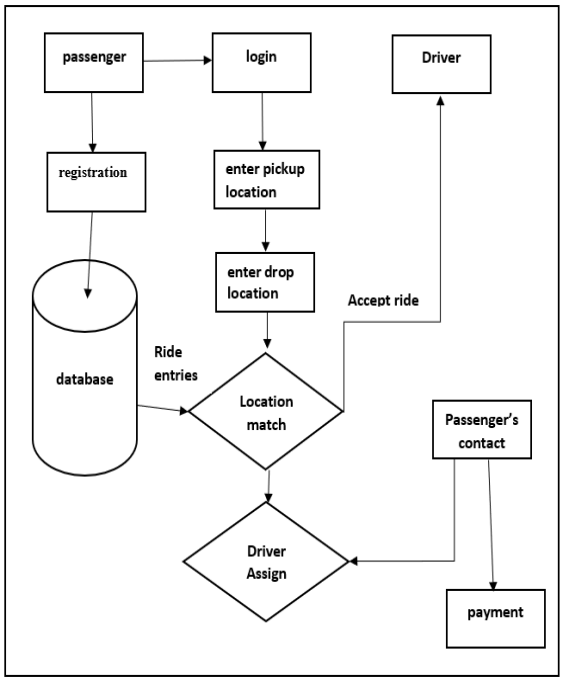
The increase in the population of the college campus has thus resulted in inadequate transport facilities. Staff and students prefer to use their car to go to college instead of using the alternative. This leads to problems such as increased traffic, traffic, parking problems, fuel burns etc. To overcome this problem, the Smart Peer Car Pooling System can be used, where people from a nearby source can take part in a trip to college. The Smart Peer Car Pooling System (SPCPS) can be a solution to a given problem. It is an effective way to reduce traffic congestion, waiting time, waste of resources and fuel consumption, improve public health, reduce the number of accidents and pollution leading to green spaces, boost the economy of the Sultan of Oman, welfare. and to improve the quality of life of the people. Governments and institutions are promoting consolidation of motor vehicles to increase traffic congestion. In this paper, a smart model of the Smart Peer Carpooling System will be introduced which is both architectural and business models tested to find

system-based solutions based on sustainable mobility.

3. Problem Definition

There is acute trouble of site visitors on roads nowadays and the growing gas costs upload to the distress of day by day customers of private automobiles. Also, use of automobiles reasons pollutants which has its unfavorable effects. Vehicle sharing is an answer however troubles like safety and consider come into picture. Canthis trouble be solved? Solution to this trouble is cellular primarily based totally Vehicle pool device. The Vehicle pool device might allow its person a secure and steady manner to percentage automobiles. This should consist of each quick day by day trips consisting of going to administrative center in the town and additionally lengthy inter-town trips.

3.1 Proposed System



- **Sign in**: Since all the operations that can be done using the application requires both the driver and passenger to be logged in.
- **Sign up**: If a person uses the app for the first time, they will have to enter and verify their credentials otherwise they will not be able to sign in to the app.
- **Offer Ride**: Eligible users will be receiving constant offers for their further rides.
- **Find Ride**: Search for trips and reservation When a passenger needs to find a vehicle for a destination, he/she can perform the search task on to the app which asks for destination, origin, departure date/time.
- **My Rides:** This dashboard will give you the information about your previous rides.
- **My Vehicle:** This will show you that which vehicle you will be travelling into.
- **Digital Payment:** You will be able to make payments digitally.
- **My Account:** You will get all your details under this dashboard.

4. Design and Implementation

4.1working

The car collection system is basically based on two things, the driver who will make his car available to combine route information with passengers who are willing to ride in the available cars. In the car sharing system, the user must be logged in to use the services we offer. The user can build a pool or get a system or both according to their needs. The driver must first build a swimming pool and provide all the required information requested The passenger must also enter the requested details of the tool such as route information. All information provided by these users will be stored on our website. The user will use the GUI provided by the system to complete all the details related to our MySQL Workbench 8.0 CE website. All entries will be saved in specific columns. Now after receiving the details of both users, whenever a user (passenger) clicks on the Get Ride option, the user will be redirected to the app activity page where the user will see the drivers based on the source and location details. The system will use the list view to display driver suggestions. The automotive integration system will download relevant information from the site based on user route details. Here's how the car collection system will work.

4.2 Technology

1) Spring Boot

- Build custom Spring apps.
- Integrate without delay with Tomcat, Jetty, or Undertow (you do not need to configure WAR files)
- Provide assumed "starter" dependencies to simplify construct configuration.
- Automatically configure Spring and Third Celebration libraries each time possible.

- Provide production-prepared capability consisting of metrics, eligibility checks, and outsourced configuration. Absolutely no code generation and no XML configuration requirements.

2) **Java Server Pages (JSP)**

- It is a server-aspect enhancing generation that permits the advent of a bendy and unbiased platform for the advent of Web applications.
- JSP has get entry to the whole own circle of relatives of Java APIs, consisting of the 'JDBC API' for getting access to company websites.

3) **Hibernate**

- Hibernate is a Java framework that helps the improvement of Java utility to have interaction with the site.
- It is an open and lightweight ORM (Object Relational Mapping) device. Hibernate makes use of the Java Persistence API (JPA) specification for statistics persistence.

4) **MySQL Workbench 8.0 CE**

- MySQL Workbench is a unified visible device for database architects, builders and DBAs.
- MySQL Workbench affords complete statistics modeling, SQL improvement, and management gear for server configuration, consumer management, backup, and more.
- MySQL Workbench is to be had on Windows, Linux and Mac OS

5) **Tomcat Server**

- What is Apache Tomcat? In fact, it's miles an open box for Java servlets and Java Server Page that permits builders to apply a number of Java enterprise applications.
- Tomcat additionally makes use of the HTTP internet server vicinity in which Java code may be used.

IDE

1) **Spring Tool Suite 4.0**

- Spring Tools four is the subsequent era of Spring gear on your preferred coding space. Redesigned from the floor up, it gives top-notch aid for growing Spring-primarily based totally business applications, whether or not you choose Eclipse, Visual Studio Code or Teia IDE.

5.Result Analysis

The following screenshots represents few aspects of projects.

- **Home page**

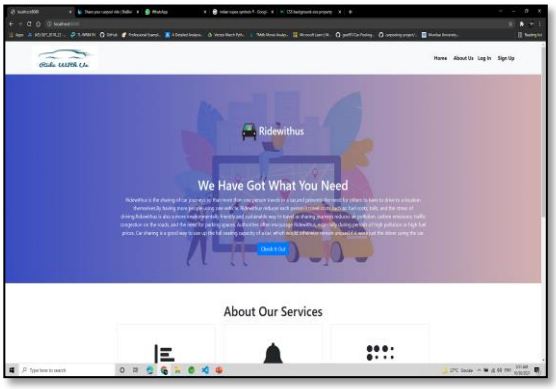


Fig. 2: Home page

- **Login page**

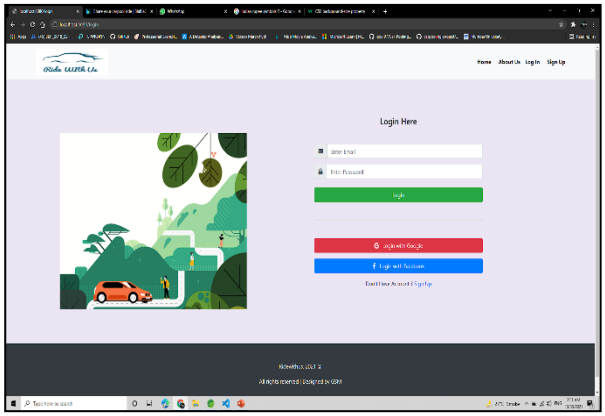


Fig. 3: login page

- **Register page**

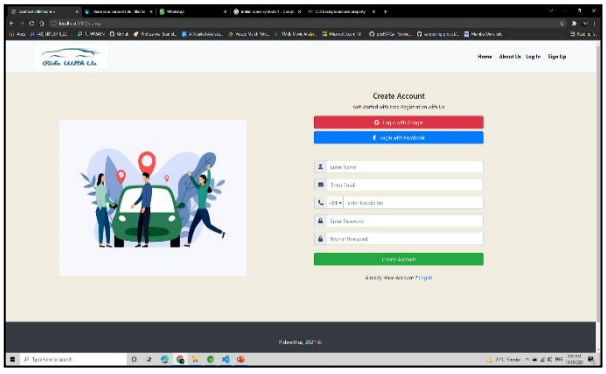


Fig. 4: register page

- **Offer ride**

Fig. 5: offer ride

- **Find ride**

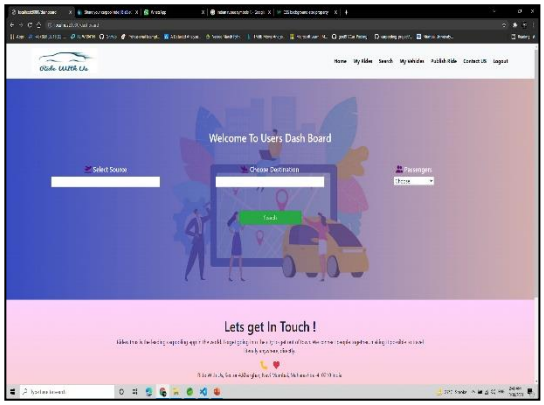


Fig. 6: Find Ride

- **My rides**

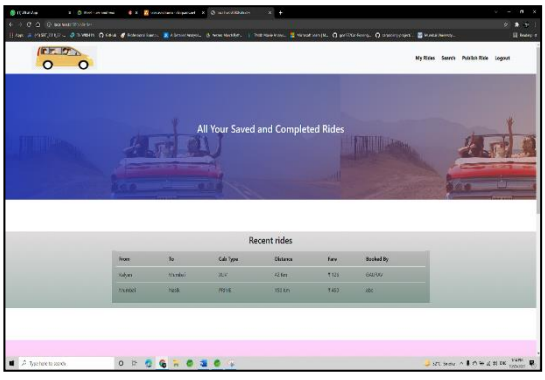


Fig. 7: Find Ride

6.Conclusion

From the above analyses, it can be concluded that a well-organized carpooling system can reduce the harmful effects of another mode of transport. But it wouldn't make sense to provide traditional carpooling, or ridesharing, which is quite inflexible and typically involves longer wait times of passengers. So, ride-sharing system is a well-organized on-demand service and can automatically match rides when a request is made that needs to be provided instead of the current service. Ridesharing seems to have no shortage of opportunities to tap into the vast untapped market potential with a variety of web app ideas discussed above that clearly demonstrate the ever-expanding horizons of these unique web app ideas and their underlying business models demonstrate.

ACKNOWLEDGEMENT

We would like to acknowledge our college A. C. Patil College of Engineering, Principal, Head of Department and management for the guidance, encouragement and co-operation throughout the project.

REFERENCES

[1] “Real-time carpooling system”, N. V. Pukhovskiv, R. E. Lepshokov, Ostfold University College.

[2] Miguel A. Vargas, Jose l. Walteros, Andres L. Medaglia, ‘Integrated Vehicle Development: Case Study in Strasbourg (France)’, Proceedings of the 2008 IEEE Systems and Information Engineering Design Symposium, University of Virginia, Charlottesville, VA, USA, April 25, 2008.

[3] Smart Peer Car Pooling System ”, Third MEC International Conference on Big Data and Smart City 2016, Raza Hasan, Abdul Hadi Bhatti, Mohammad Sohail Hayat, Haftamu Menke Gebreyohannes Syed Imran Ali, Abeer Javed Syed.

[4] Gérald Arnould, Djamel Khadraoui, Marcelo Armendáriz, Juan C. Burguillo, Ana Peleteiro,” A Transport Based Clearing System for Dynamic Carpooling Business Services” 2011 11th International Conference on ITS Telecommunications.

[5] Horse-sharing program: Review and procedure "Ms. Mira Shah, Ms. Aarti Hiremath, International Journal of Advanced Scientific and Engineering Research, 12th Dec 2016.