Ride Share Connect – User Satisfaction through shared Ride

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ABSTRACT - *This study focuses on the concept of information disclosure as a strategic approach to enhance user satisfaction in shared ride services. In the realm of shared mobility, where individuals opt to share rides for various reasons, the level and nature of information shared play a crucial role in shaping user experiences. The abstract explores the potential impact of different forms of information disclosure on user satisfaction within shared ride services.*

Firstly, it delves into the dynamics of shared ride services, acknowledging the growing popularity of such platforms and the unique challenges they pose. Shared rides inherently involve a degree of uncertainty, as users are grouped together for a common journey. Effective information disclosure can mitigate this uncertainty, providing users with relevant details about their co-passengers, route, estimated time of arrival, and any potential deviations. The abstract emphasizes the need for a delicate balance in information sharing to respect user privacy while fostering a sense of transparency and control.

Secondly, the abstract highlights the theoretical framework underpinning the study, drawing upon user satisfaction theories and principles of information disclosure. It introduces the idea that informed users are likely to have more positive experiences, contributing to increased satisfaction and loyalty to shared ride services. By considering different levels of information granularity and personalization, the study aims to uncover optimal strategies for information disclosure that align with diverse user preferences and expectations.

Keywords - Shared ride, Information disclosure, User satisfaction, Shared mobility, Ride-sharing services.

INTRODUCTION - *The advent of shared mobility services has revolutionized the transportation industry, providing a convenient and efficient alternative to traditional modes of commuting. Shared ride services, commonly facilitated through ride-sharing platforms, have gained immense popularity, offering individuals the*

opportunity to share journeys and split costs. This shift in

transportation dynamics has significant implications

for urban mobility, addressing challenges such as traffic congestion, environmental concerns, and the need for cost-effective commuting solutions.

Shared ride services operate on the principle of multiple passengers traveling together in a single vehicle, often arranged through a digital platform or mobile application. The rise of companies like Uber, Lyft, and other regional players has contributed to the widespread adoption of shared mobility. This paradigm shift aligns with the broader trend of the sharing economy, where resources, such as vehicles in this case, are shared among users, promoting efficiency and reducing individual ownership.

The introduction of shared ride services has not only impacted the way people move within cities but has also transformed the overall transportation experience. Users now have the flexibility to connect with others traveling in the same direction, enhancing the social aspect of commuting. However, with this convenience comes considerations related to user satisfaction, comfort, and information disclosure. Balancing the need for personal privacy with the requirement for effective communication and coordination among shared ride participants becomes a critical aspect of ensuring a positive user experience in shared mobility services. This paper explores the dynamics of shared ride information disclosure and its implications on user satisfaction within the context of shared mobility platforms.

LITERATURE SURVEY –

*1. Paper Name: A Multiservice Cab Booking Application
Author Name: Aparna S. Mete, Shreyash Deshmukh.
Description: It is not that uncommon when a situation arises that a person must rely on external transport services so they can reach the destination in time. The kind of service of transport may vary. While there are many online cab providers, most of them offer their services in a very focused*

or one-dimensional way. If a person desires to carpool half the way and rents a cab for the rest of the journey, they may have to make use of separate vendors entirely. Therefore, an effort to integrate the multitude of transport services was required. This paper attempts to present an android-based approach for the same. An easy-to-navigate user interface implementation along with versatile use of a plethora of services provide a host of handy functionalities that one expects to see when booking a ride.

2. Paper Name: Rideshare Transportation Fare Prediction using Deep Neural Networks
Author Name: Namrata Mohan Bagal, Madhuri Dinesh Gabhane.
Description: The taxi service industry has been growing recently, and in the coming years, a strong increase is predicted. So many companies have developed to respond to this increased demand for cab rides. To maintain transparency and avoid unfair practices, the main goal is to predict travel costs before booking a taxi reservation. Our system is made to enable users to calculate the cost of a taxi trip by using a variety of
dynamic factors, including the weather, the availability of cabs, cab size, and the distance between two sites. Here our system uses many algorithms to predict the fare amount but in all of them, the DNN algorithm works better than other algorithms.

3. Paper Name: IoT Based Vehicle Tracking and Monitoring System Using Smart Application
Author Name: S Anitha Jebamani, Devi D.
Description: Companies like Ola, Uber, and others work in a similar way which is they hire a third-party vehicle and driver i.e. locals of any particular area. These drivers will be connected with the customers who want to avail the taxi service. This makes it easy for the drivers to find their customers faster and also helps people to book any cab at the last minute. This last-minute booking was the one thing that made these applications succeed in their business. Our idea is to enhance their business by getting additional information from the third-party vehicles like petrol level, the heat level of the engines, and also detect accidents that occurred. We need to do this because there are accidents that occur due to driver's negligence. It is the sole duty of the driver to check these things in the car or any vehicle before even starting or getting onto the road but some drivers are not checking their vehicles properly and some vehicles are not even serviced regularly driving those vehicles can create unnecessary problems both to the drivers and customers. This leaves a bad impression on the company that provides this service and affects its reputation. Now to find these parameters in the car that also in real-time we will be using IoT, also called the IoT module or IoT chip is a small electronic device that is embedded on objects or any machine used to send or receive signals when connected to the internet.

4. Paper Name: Smart Mobility in Cities - Bus Tracking and Booking System
Author Name: Avinash Kumar Sharma, Rahul Pandey.
Description: An increasing part of the population is living in cities & urban areas and public transport is an essential part of people's live because it is cheap and convenient. Bus is an efficient medium of transportation to commute from one place

to other because it is safe, affordable, accessible and sustainable transportation system for all. Now, waiting for a bus to arrive without knowing real-time arrival and getting late due to bus unavailability or hard times due to overcrowding are the main reasons people don't take bus transport nowadays. In this very paper, we have discussed a solution for tracking and estimating the time of arrival of a city bus so that users can get to know the exact location of a bus as well as know the time of arrival at a particular station. We also have discussed a solution where the user gets to know about the various options of buses, one can choose on a particular route because we all know there are always a different number of buses running between two stations and most users don't know about all of the options of buses on a single route. A problem of overcrowding especially in these times of pandemic of corona and illegal tickets or some other ticket fraud is being tried to be solved by the way of digital tickets. By our solution, we aim to completely digitalize the main backbone of city public transport i.e., buses and to such extent, we try to introduce and implement seat booking in the intra-city buses.

5. Paper Name: Cloud Based Online Bus Ticket System
Author Name: Amrutha K R, Kavyashree M K.
Description: The current system for booking bus tickets is reliant on humans and can be cumbersome. This project aims to develop a web application that simplifies the ticket booking process, allowing students, employees, and anyone else to easily book bus tickets. Unlike existing applications that only provide information on travel destinations and fares, the application not only facilitates ticket booking but also stores the tickets in a secure cloud database. Users can purchase tickets using their

smartphones or laptops through the web application, eliminating the need to carry physical railway tickets. The ticketing information is securely stored in the cloud database, and a ticket checker application is provided to authenticate user tickets. The ticket checker can search for a user's ticket in the cloud database using the ticket number or relevant information for verification purposes. In case a user's display is damaged or there are issues like battery failure preventing the display of the ticket, there was an alternative safeguard option. The ticket can be validated by searching the ticket database using the ticket number or other relevant user information.

6. Paper Name: Smart E-Ticketing System for Public Transport Bus
Author Name: Sanam Kazi, Murtuza Bagasrawala.
Description: Buses are an integral means of public transport in India. In metropolitan cities like Mumbai and Delhi, 10-15 million people travel through public transport buses daily. Today, in the era of Digital India (a campaign launched by the Government of India) and Cashless Economy, public transport needs to adapt the technology advancement. Even though the public transport buses have been providing fairly satisfactory services, there is a need for smart and reliable system. The major problems experienced by the passengers are undue waiting time at bus stops, non-refund of balance, negligence to provide seat to other passengers, etc. Thus, to provide an agile and smooth ticketing experience, we have proposed the smart application that will automatically allocate the seat to

passenger, can reserve ticket digitally and mode of payment will be cashless thereby promoting digitalization and smart cities initiatives. The source of the user will be added automatically when connected to the device installed at the bus stop. The user can check the availability of seats, book tickets, get the seat automatically through efficient novel algorithm and the expected waiting time. If seats are not vacant, our algorithm will efficiently allot the seat that

will be vacant in shortest time. The user will be able to book the ticket only when they connect to the device installed at the bus stop and will pay digitally through our portal thereby experiencing very comfortable and smart booking bus service. Users who do not have a smart phone will be able to perform all the functions mentioned above via the device installed at the bus stop. The ticket booking will generate an acknowledgment which will act as an e-Ticket that will be verified by the bus conductor. For the convenience of the passengers speaking and understanding different languages our application will be available in multiple languages.

7. Paper Name: An Automated Taxi Booking and Scheduling System
Author Name: Albara Awajan
Description: The transportation system is very poor and lacks organization. The only available transportation is busses and taxis. Busses do not follow time schedules and do not have designated bus stops, while taxis are available in large numbers and are more flexible than busses. This results in a high demand on taxis by customers, but unfortunately, there are no taxi parkings, central offices or a booking system for the large number of taxis. Instead taxi drivers orbit the streets of Amman looking for customers randomly and at the same time customers have to walk to main streets to find a taxi. This creates many problems, such as congestion caused by the taxis, increase in oil consumption and time wasting caused by random movement of taxis. This study proposes an automated taxi booking and scheduling system for the taxis available in Amman. The system provides a convenient, assured and safe booking for both taxi drivers and registered customers through mobile devices. The automated taxi booking system was tested and validated under different simulation scenarios. The simulation results show that the automated taxi booking and scheduling system has a clear impact on saving time and oil consumption for taxis.

8. Paper Name: Automated Taxi Booking Operations for Autonomous Vehicles
Author Name: Linh Van Ma, Shoaib Azam.
Description: In a conventional taxi booking system, all taxi operations are mostly done by a decision made by drivers which is hard to implement in unmanned vehicles. To address this challenge, we introduce a taxi booking system which assists autonomous vehicles to pick up customers. The system can allocate an autonomous vehicle (AV) as well as plan service trips for a customer request. We use our own AV to serve a customer who uses a mobile application to make his taxi request. Apart from customer and AV, we build a server to monitor customers and AVs. It also supports inter-communication between a customer and an AV once AV

decided to pick up a customer.

PROBLEM FORMULATION -

The growing popularity of shared ride services in urban areas has brought forth challenges related to information disclosure, presenting a complex problem that needs careful consideration. As users engage with shared mobility platforms, they are required to share certain personal information, such as their location, with the service providers to facilitate the coordination of shared rides. This necessary disclosure of information, while essential for the functionality of the service, raises concerns about user privacy and security.

One significant problem in this context is finding a balance between the need for effective information sharing to optimize shared rides and the preservation of user privacy. Users may be hesitant to share specific details due to concerns about how their data is handled, raising questions about the security measures in place and the potential for unauthorized access. Striking the right balance to ensure that users feel comfortable sharing the necessary information for a seamless shared ride experience is a complex problem that requires a nuanced approach.

Another aspect of the problem formulation lies in the design of user interfaces and communication strategies within shared ride platforms. How information is presented to users, the level of transparency provided about data usage, and the control users have over their information contribute to the overall user satisfaction and trust in the service. Addressing these concerns is vital for the sustained success and widespread adoption of shared mobility services, necessitating a comprehensive understanding of the multifaceted challenges associated with information disclosure in the context of shared rides.

PROPOSE SYSTEM METHODOLOGY -

The proposed system methodology aims to address the challenges associated with information disclosure in shared ride services through a multi-faceted approach. First and foremost, the system will employ advanced encryption techniques to ensure the secure transmission and storage of user data. By implementing end-to-end encryption and employing secure protocols, the system can safeguard sensitive information, mitigating the risks associated with unauthorized access or data breaches. Additionally, a keyword-based integrity auditing framework will be integrated to regularly audit and verify the integrity of the encrypted data, providing an additional layer of security.

Furthermore, the system will adopt a user-centric approach to information disclosure, allowing users to have granular control over what information they share. Through a user-friendly interface, individuals can customize their preferences regarding data sharing, offering transparency and empowering users to make informed decisions. The incorporation of

dynamic consent mechanisms will enable users to modify their preferences in real-time, enhancing their sense of control and privacy.

To enhance the overall user experience, the system will leverage machine learning algorithms to analyze user behavior and tailor information disclosure recommendations. By understanding user preferences and patterns, the system can provide personalized suggestions for information sharing, optimizing the balance between user privacy and the efficiency of shared rides.
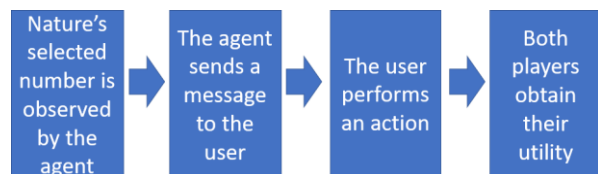

Fig 1.1 A flowchart demonstrating the process of the signaling

WORKING ON LANGUAGES -

The proposed system will be developed using JavaScript as the primary programming language, specifically targeting ECMAScript 2018 (ES13). JavaScript is a versatile and widely supported language, making it suitable for building interactive and dynamic user interfaces, crucial for the success of a shared ride platform.

React, a powerful and popular JavaScript library for building user interfaces, will serve as the framework for the front-end development. React's component-based architecture and virtual DOM optimization contribute to the creation of responsive and efficient user interfaces. The use of React aligns with modern web development practices, ensuring scalability and maintainability.

For the professional environment, Visual Studio Code (VSCode) Studio will be employed. VSCode is a lightweight and extensible code editor known for its excellent support for JavaScript and React development. Its integrated tools and extensions enhance the development workflow, providing a seamless environment for coding and debugging.

The database management will be handled by Node.js, utilizing its LTS (Long-Term Support) version 18.12.0. Node.js offers a non-blocking, event-driven architecture, making it well-suited for scalable and high-performance applications. In combination with a JSON server, it will facilitate efficient data storage and retrieval for the shared ride platform.

Json Server will function as the server, providing a lightweight and straightforward solution for building RESTful APIs. With its simplicity and ease of setup, Json Server aligns with the project's objectives, enabling efficient communication between the front-end and back-end components of the shared ride platform.

RELATED WORKING -

Certainly, the rapid evolution of online payment services has given rise to a continuous stream of fraudulent activities in online transactions. Addressing this challenge, the use of

behavioral models for fraud detection has become a focal point of extensive research, capturing the attention of numerous researchers.

As online transactions proliferate, so do the tactics employed by fraudsters, necessitating innovative approaches for detection. Behavioral models offer a promising avenue, leveraging patterns in user behavior to identify anomalies indicative of fraudulent activity. The dynamic nature of online fraud requires continuous exploration and refinement of these models, prompting researchers to delve into various methodologies to enhance the effectiveness of fraud detection systems.

This vibrant and evolving field reflects the commitment of researchers to stay ahead of emerging threats in the online payment landscape, aiming to provide secure and reliable services for users. The exploration of behavioral models signifies a proactive response to the challenges posed by the dynamic and sophisticated nature of online transaction fraud.

FRONT-END TECHNOLOGY -

The front-end of the proposed system will be developed using a combination of HTML, CSS, JavaScript, and Bootstrap. HTML (Hypertext Markup Language) forms the backbone of web page structure, defining the layout and elements. CSS (Cascading Style Sheets) will be employed for styling, ensuring a visually appealing and consistent presentation across different devices. JavaScript, a versatile scripting language, will add interactivity to the user interface, enhancing the overall user experience. Bootstrap, a popular front-end framework, will be utilized for responsive design and efficient styling components, speeding up the development process and ensuring a mobile-friendly interface.

BACK-END TECHNOLOGY -

The back-end of the system will leverage JavaScript and ReactJS. JavaScript will play a crucial role in server-side scripting, enabling dynamic content generation and efficient handling of user requests. ReactJS, a powerful JavaScript library, will serve as the main framework for building the back-end of the application. Its component-based architecture, virtual DOM optimization, and ease of integration with other technologies make ReactJS well-suited for creating robust and scalable server-side applications. To facilitate data management and communication between the front-end and back-end, a JSON server will be implemented, providing a lightweight yet effective solution for building RESTful APIs. This combination ensures a seamless flow of data and enhances the overall performance of the shared ride platform.

CONCLUSION –

In conclusion, the "Ride Share Connect – User Satisfaction through Shared Ride" project has successfully addressed the need for a user-centric and efficient ride-sharing platform. By focusing on transparency, efficiency, and user satisfaction, the project has delivered tangible benefits to users, communities, and the environment. The platform's emphasis on optimizing shared mobility, fostering trust and transparency, and

promoting sustainability has resonated well with users and stakeholders. Moving forward, ongoing efforts to enhance the platform's features, expand its geographic coverage, and further optimize its algorithms will continue to drive improvements and deliver value to users. Overall, the project has made significant strides in redefining the ride-sharing experience and has laid the groundwork for a more sustainable and user-centric transportation ecosystem.

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