"Judge-ur- Ride"
An Android Application of Systematic Fare Estimation system for comparison of Cab Services

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Abstract : The existing system takes the input from the user as source and destination for the journey and compares fare of various categories between different cab services and show the result as ride is available or not for the journey, But there are some issues which the current system unable to resolve as some times the cab services added the extra charge for the journey if the cab is booking at night time and the different climatic condition such as rain also allow service providers to charge extra money for the journey. So this extra charge is not shown when the ride is book in current scenario. The present system to boost the accuracy of the taxi fare estimation by integrating the official API's provided by Ola and Uber to improve the accuracy of the taxi fare estimation when running the prediction program. Dynamic pricing implemented in the form of a surge price multiplier (SPM) by mobility-on-demand services such as Uber, Ola etc. However, they have significantly altered the demand-supply dynamics of the fixed fare rate traditional taxi market. The main purpose of our project is to provide applicable fare for the journey. Judge ur Ride, a product of unleashed, is an all-inclusive rideshares and taxi information source. Judge ur Ride is not another transportation service; instead, it is a search engine to help you find the best ride from source to destination.

IndexTerms – **SPM, API**

I. INTRODUCTION

There are many programs for predicting a taxi fare both on the Website and on the smart phone application market and there has also been some research into the routing options of the electronic map. [3]However, the results are not precise enough and are even limited to the user setting the fare rate and other information, not to mention safety protection. [1] Some cities do not provide upfront fares. Instead, you're charged either a minimum fare or a fare based on the time and distance for your trip's route, including a base fare, booking fee, surcharges, tolls, and other relevant factors such as dynamic pricing when demand for rides is high in the area of the city where you're requesting a ride. Fares may vary by location, the vehicle option you select, and other factors. In the present scenario the each taxi services have their own fare calculator which differ from the city to city and the user who is using their application, the offers are not predictable and the charges are also not fixed but in many cases it is for sure that the long distance journey will be highest paid and the type of car available for the journey is almost on the basis of the city.

We entitled our projects as ─Judge ur Ride. Judge ur Ride is a Mobile and Web application which helps the users to view the fairly calculated charges for their journey. The working of the project is as provides, the results led to the conclusion that the methodology is effective for estimating journey destinations at the disaggregate level and identifies false positives reliably new users can firstly register them self and then can go for login into the application & user who are already registered once can directly go for login. After login students can see the Home page which will show two text boxes for getting source and destination respectively. For better understanding, we are providing fare comparison among Ola an Uber cab service providers. In this system the extra charges such as night charge if added on a particular route then it will be shown specifically [2].

Figure 1: Logo of OLA and UBER Cab Service

II. LITERATURE REVIEW

Previously the work has been done in the field of taxi fare system specially if we talk about the Ola & Uber is need modification very rapidly because the services and policies of these two big companies getting more updated and large so up to now the system are

able to generate the a predicting amount which may be or may not be the same, another one different types of technique are evolved to calculate the fare for ride. [4]

There are many researches which are able to define the best estimated fare, comfort level of the passengers, behavior of the driver, extended time, and the best route chosen. But most of the work is done for the bus or for the particular taxi provider city or company. [5]

Most of the fare calculations are specifically design for the particular company only. There are multiple algorithm's design which work as a common platform for all the taxi services. These service providers specifically work on the parameters like distance, duration of journey and the offers available for the journey. [6]

At present, we are not aware of any published literature on ride sourcing, so we rely on related research on desharing and taxi to provide insights into expected usage characteristics and potential impacts. Empirical evidence indicates that ridesharing can provide transportation, infrastructure and environmental benefits, although the exact magnitude of these impacts is not well understood While not specific to ridesharing alone, one report estimated that using information and communication technology to optimize logistics of individual road transport could save 0 million metric tons of carbon dioxide emissions by 2020 in theU.S [7].

III. PROBLEM DOMAIN

The existing system takes the input from the user as source and destination for the journey and compares fare of various categories between different cab services and display the result as ride is available or not for the journey. And also calculate total fare (initial fare + metered fare) for that particular journey, Number of passenger can seat in a cab at a time. But there are some issues which are in the current system unable to resolve Such as

[1] The cab services added the extra charge for the journey if the cab is booking at night time so this extra charge is not shown when the ride is book in current scenario and the another one the different climatic condition (ex. Rain) also allow service providers to charge extra money for the journey. This climate based charge also not shown when the fare is calculated for the current system.

[2] Drivers especially at night demand extra cash apart from the fare computed by Taxi App. And sometimes while going to city outskirts they have to return with no passengers leading to low economic viability but the drivers should bring this up with Taxi operators and not the customers.

Based on the motivation and preliminary correlation analysis, the estimation and prediction are important and feasible in running. To ease the representation, we formulate the problem as estimation and prediction of values of time series.

IV. PROPOSED SOLUTION

Now, the solution to this problem isn't as straight forward because while both Uber and Ola claim that these surge rates are simply due to the variance in demand and supply, one doesn't know for sure if this is explicit truth. [13] In our report on how users in Delhi had fallen out of love of both Uber and Ola, multiple commuters claimed that it wasn't just a case of disparity between demand and supply of cabs. To remove the problem of these different surge Ola &Uber have provided their API's for the better convenience and it can be implemented in the projects after integrating the actual fare for the journey will be easily calculated.

Judge ur Ride, a product of Unleashed, is an all-inclusive rideshare and taxi information source. Judge ur Ride is not another transportation service, instead, it is a search engine to help you find the best ride from source to destination. Judge ur Ride is also a flourishing community of rideshare/taxi enthusiasts, with features like its fare comparison calculator. Judge ur Ride brings together all aspects of rideshares and taxis

Application works majorly in three steps.

[1] Ride Availability: - Get information about rides available at a location that you provide at the time of request.

[2] Ride Estimate: - User can find out how much a trip might cost even before/without booking a ride.

[3] Ride booking: - Help your users go places by letting them book a ride when they're looking to travel.

V. IMPLEMENTATION

We have implemented our project which runs over the internet with the help of web browser so anyone having an internet connection has access to Judge ur ride application and for students we have designed an android app so anyone is easily uses Judge ur ride application.

The following are the steps for book a Ride and Compare the fair between OLA and UBER
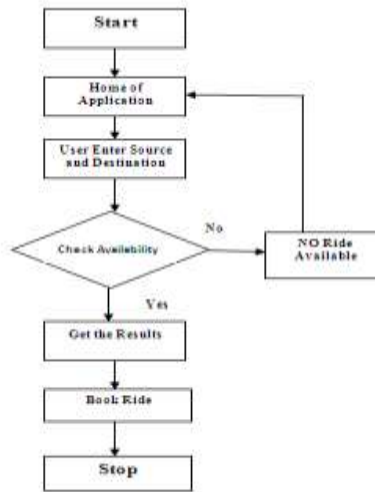
Figure 2: Flow of Judge ur Ride Application

Step 1: With the help of web browser user head over the URL of our project and gets the home page.

Figure 3: Home page of application

Step 2: After page opens now fill all the details as source and destination and click on "Get Route" button. This is the page where user can enter source and destination and contains logo.

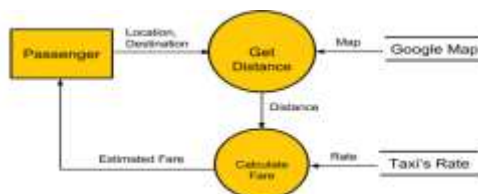Figure 4 (A): Setup Destination and Estimate fare

Figure 4 (B): Get Destination and Calculate fare

Step 3: The information of the route is displayed and distance, duration are also shown
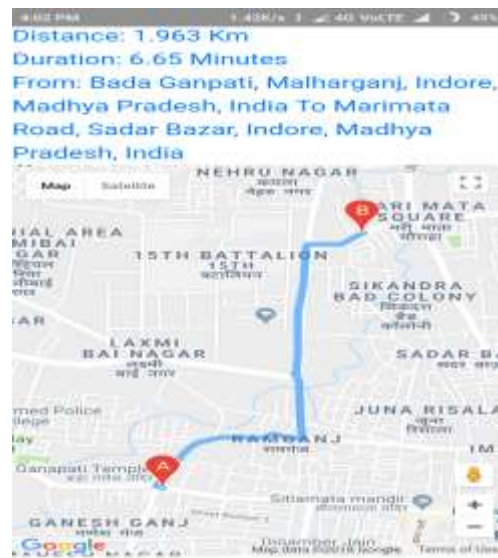
Figure 5: Route and distance is displayed

Step 4: At the end if user is ready to book either Ola or uber cab than can directly click on the link and will be redirected to the respective Home page. This is where the information of calculated fare is shown, OLA and UBER results are display separately.

Figure 6: Results of Fare Estimation

VI. CONCLUSION

We are developing a system which an upgrade version of the current system, the present system is not providing the services to fullest so we tried to utilize the opportunities provided by Ola and uber in such a way that the customer can get the benefits much more than to the current time. This will lead to better efficiency and fewer user errors, which in turn may result in lowering the turnaround time and the better fare. By introducing this system we are enhancing the productivity of traditional fare calculating system. By using this system we are able to compare the information on time and with less.

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