

# A HYBRID APPROACH FOR TRAVELLING SERVICE BY USING DATA PARSING AND ENHANCED PREDICTION

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**ABSTRACT** - The aim of this project is to make online booking of a car that can be used temporarily for a fee during a specific period. Getting a rental car helps people that do not have access to their own personal vehicle or do not own a vehicle at all. Recent research on recommender systems gives an idea of uses social network data to travelling system with better prediction and improved accuracy. The individual who needs a car must use this service which gives a comparison cost of all other online car booking services (cost comparison between OLA, UBER etc) by using parsing. This paper expresses views on Google data based travelling systems by considering usage of various recommendation algorithms, functionalities of systems, different types of filtering techniques, and artificial intelligence techniques. After examining the depths of objectives, methodologies, and data sources of the existing models (Ex- OLA, UBER etc), the paper helps anyone interested in the development of travel recommendation systems and facilitates future research direction.

## General Terms

Generating suggestions, Intelligence prediction, Filtering, Price comparison, Travelling Services etc.

## Keywords

Data Parsing Algorithm, Bayesian networks API, Google map API, JSP etc.

## 1. INTRODUCTION

A hybrid approach for travelling service by using data parsing and enhanced prediction project is an online service that rents automobiles for short period of time for a fee whether in a few hours or a few days or week by using the concept of data parsing and artificial intelligence to take the data from user review and social sites. This project will provide a cost comparison between all other online booking services and also suggest the different places which users can travel by using the concept of prediction and filtering through AI. This basically aims to make traveler's journey easy and cost effective. This is not for a particular company it is a hybrid approach by which user can choose any of the car booking services and can book car from any online service which is cost effective for him. Traveler system works as a recommender system which uses data from many sources to make predictions and to give advice of different places for a user. Factors

such as stability and accuracy are balanced in the generated recommendations.

The main aim of using this technique is to generate customized recommendation according to the user preferences and interests. This traveler recommender system has an objective to filter unwanted information and to provide specific results for the particular user. In the travel recommender systems, proposed model learns the user preferences and generates places of attractions according to the user interests. This paper focuses on the recommender systems and their application in tourism by using concept of data parsing and artificial intelligence.

### 1.1 PROBLEM STATEMENT

Using this project service will help people that do not have access to their own personal vehicle or do not own a vehicle at all. Since there are no user ratings provided by these new users, memory-based content filtering cannot help in the prediction of new places. New users may reject unreliable, no personalized recommendations and the recommendation services too. Adding additional information to the new user database, such as preferences, tackles the new user problem. The individual who needs a car must contact to a traveler company and contract out for a vehicle. The problem of generating no reliable suggestion due to lack of initial ratings called as cold start problem.

### 1.2 Significance of Problem in Real World & Applications

In this time if a user wants to travel to any place then he becomes confused to choose which traveler service and which place is best on the basis of cost and also on the basis of services. This system makes this problem easy by comparing the price between all online car booking services and it shows the result in increasing order of cost. The travel recommender system uses artificial intelligence techniques to generate personalized suggestion to the user. This project applies the applications of the recommender systems in the field of e-Tourism. Geographical Information Systems are used in this project for the management of geographical data that will be associated with the recommended locations and activities. Hence, the locations, distances, and driving directions are obtained from geographical web service technologies. Continuous calculation of user's position will

be available in this project by using the concept of Google map and it will also show the time required to reach a location so that planning can be made in real time. The planning algorithm will consider only the nearest places through AI.

### 1.3 OBJECTIVE

- Application will suggest the places which user can travel by using the concept of AI.
- It will also show the comparison cost from other travel services by using parsing technology.
- Application provides online support for booking the cars to end users.
- It should provide services at various locations in various types (multiple types of cars).
- For doing reservation user needs to register first.
- Charges will be different for different type of reservation (based on car type and duration type).
- User have to enter pickup location, drop location, time while doing reservation.
- User can book car for other dates also (like for next month).
- User will be able to pay by credit card, debit card, cash or demand draft.
- Application will send email messages regarding to reservation, confirmation and cancellation to the users.

## 2. BACKGROUND AND RELATED WORK

[1] HANIF et al stated that there was demand for Cab service which can be booked through call and offered by MERU Cab. The cab services provides security by using global positioning system (GPS) and this provides women taxi drivers women for women passengers especially during night. Harding et al (2016) said that the auto-rickshaws are more popular in urban transport before the creation of cars and cabs. HORSU and YEBOAH (2015) had argued that driver behavior also makes impact on customers and in Ghana bad behavior of driver shows negative impact on user satisfaction. The variables like continuous service, comfort, and affordability have an impact on customer.

[2] G. VENKATESH1, Over the past 30 years, economic restructuring and technological advancements have led to new business models resulting from disruptive innovation. Technology companies and start-ups have

developed a better cost model by utilizing smart phone enabled apps to offer simpler and less expensive products and services. UBER services has demonstrated that its innovative model can disrupt the market. UBER, an on-demand ride sourcing service that connects passengers to local drivers in real time using smart phone technology has been successful due to its low fixed cost model. Ride seekers have a more reliable and faster alternative. Drivers get higher hourly earnings through the avoidance of costly regulations. This has severely disrupted the taxi service industry. Companies like UBER, LYFT, Sidecar and HAILO are called "Transportation Network Companies". Use of smart-phones to avail of taxi services has now become very popular across the globe. In 2014 there was a battle between two Chinese taxi aggregators.

[3] UTSAV PANDYA, Taxi market in India is growing rapidly with a lot of new entrants who run private taxi companies apart from the existing public taxi market. The public taxi market consists of taxis that are too old with very little comfort and safety, while on the other hand the taxis in the private taxi market are modern along with features like GPS, more comfort and safety. Thus, to study the impact of the private taxi companies on the public taxi market, we have carried out this research by using specific variables that will explain the effect of the private taxi market on the public taxi market. These variables have been taken into account considering the usual factors that a customer might think of while thinking hiring a taxi. So according to the variables considered, a theoretical framework was developed containing the dependent and independent variables along with the null and alternate hypotheses that had to be proved true or false depending upon the data collection. A questionnaire was prepared with the help of which two sets of data were collected of the public taxi market and the private taxi market through a survey filled by people chose at random using the random probabilistic sampling technique. The data collected was analyzed using the SPSS software and Minitab software for which a set of analysis techniques were applied and the data was interpreted which helped in proving the corresponding null or alternate hypotheses true as per the requirement of the research. Keywords: Mobile Apps, Ola Cabs, Taxi for Sure, Yellow cabs, Black cabs.

[4] Lee et al. the first approach that incorporated Google Maps Services for the web interface allowing the plotting of paths on map, guiding the user through the personalized route to the selected locations and food places at the Tainan City. City Trip Planner, e-Tourism, and Optimum are some of the web based systems in which a map is marked with the scheduled locations to be visited for a single day.

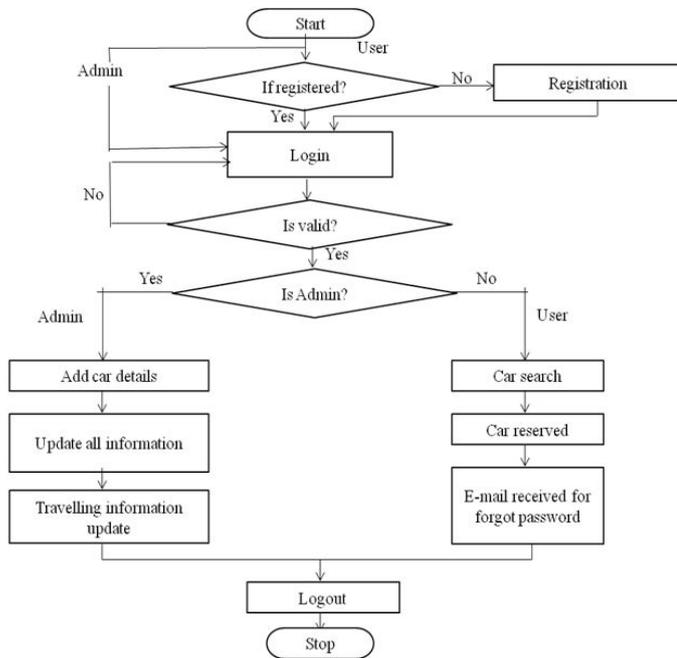
### PARSING TABLE

Sr. No.	Company Name (Brand)	No. of Cities	No. of Cabs	No. of Booking Daily	Booking through			Payment via Credit Card
					On Call	Website	Mobile App	
1	Meru Cab	12	10,000	25,000	30-40%	30%	30-40%	15%
2	Mega Cabs	07	3,500	15,000	90%	10%	0%	--
3	Easy Cabs	04	3,500	15,000	80%	10%	10%	--
4	TAB Cab	01	4,000	14,000	82%	10-15%	8%	--
5	Ola Cabs	19	25,000	--	40%	10%	50%	25-30%
6	Taxi For Sure	12	7,000	--	50%	25%	20-25%	25-30%
7	Uber	10	--	--	--	--	100%	100%
8	Savaari	56+	3,000	--	35%	65%	--	--
9	TaxiGuide	76+	--	--	20%	80%	0%	--
10	Fast Track*	26	12,000	35,000	90%	10%	0%	--

### 4. CHALLENGES AND LIMITATIONS

- Internet connection should be proper.
- Proper working filtering mechanism/algorithm used (like, content-based, hybrid, etc.)
- Proper prediction techniques used to enhance the results (such as Bayesian networks, singular value decomposition, and fuzzy models).
- For review and suggestion sparsely level and scalability of database;
- Only applicable for travels

### 3. WORKING METHODOLOGY TO BE USED



- Set your pickup location (Ex: from Airport, Railway station, Office, Home or your current location)
- It will show you the cost of travel from other cab services.
- Pick the cab you want and see all available cabs.
- Tap "Ride now" to book your ride
- Get instant confirmation with driver details
- See your ride route on the map and it will also show what distance you have travelled in the time when you started.
- Pay only after completion of your ride or use "Ola Money" to ride cash-free.

### 5. EXPECTED RESULT

- It provides services for 2.4x7
- It provides proper working of Google map such as distance, travelling time, suggestion of places ,direction of routes.
- It will also show the pop up suggestion about the different places which is nearest to the user.
- It will give the table which contains the cost comparison from all the traveler services.

### 6. CONCLUSION

The project titled "A hybrid approach for travelling service by using data parsing and enhanced prediction" with the aim of implementing key concepts in JAVA and Artificial Intelligence was found to meet all its objectives .The interface provided has been designed in a manner so that all users can develop a clear perception about the practical implementation of this project. The project has all the functionalities implemented to work on practical problems. Car booking business has emerged with a new goodies compared to the past experience and user reviews where every activity concerning car rental business is limited to a recommend location only. Nowadays, customers can reserve cars online, rent car online, and have the car brought to their door step once the customer is a registered member or go to the office to pick the car. The web based car rental system has offered an advantage to both customers as well as Car Booking Company to efficiently and effectively manage the business and satisfies customer's need at the click of a button.

### 7. FUTURE WORK

- It also plans to further invest in its technology platform to provide a better experience to customers.
- We will also focus to expand its footprint to smaller cities.

- In future we develop hybrid software which will be accessible for all platforms.

## 8. ACKNOWLEDGMENTS

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