

# Survey On Smart Taxi Booking System

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## ABSTRACT

Taxi services have become an essential infrastructure in a city's transportation. In today's world, transportability has become a very important need for people as they envisage how to accomplish specific tasks requiring travel, time, and distance. Most folks use cab services for their daily transportation need. Many taxi companies are looking for unified taxi booking systems as it makes life easier for the folks as well for the company. India is a country with over 13 million visually flawed people as per the Census of 2011. With the advancement of the available applications and technologies, a means of easy and safe transport for these flawed people can be proposed. E-Cab Service aims to provide these voice-based transportation services aiming visually flawed as a website that is intuitive to book cabs.

**Keyword:** - Web technology, Responsive design, E- Cab Booking, Visually Flawed, Transportation Services.

## 1. INTRODUCTION

Nowadays, especially in cities, taxicabs play an essential role in coupling the gap between public and private transportation [1]. A taxicab is a vehicle service, hired along with the driver for either single or in a mutual pool manner. It brings passengers between the selected locations. In public transport modes, where the pickup and drop-off locations are pre-ordained by the service provider, taxis provide a hybrid bus/taxi mode. Indian laws make it compulsory for all taxicabs to install fare-meter. Cabs are a very prominent means of transportation because it provides a comfortable, quicker, and more secure journey.

In this system, we have focused on how to make the process of taxi booking transportation for the visually flawed easier. Visually flawed people require a system that is better suitable to their needs, to make cab/auto rickshaw bookings. The current transportation systems like ola and uber have no facilities that are customized for the use of impaired folks. E-Cab Service is aimed at providing these services to the visually flawed in the form of an application that is intuitive to book cabs. This system delves into the process of developing a system that brings cab booking services to the fingertips of visually flawed folks [2], and hopes to bridge the gap between the visually flawed and other members of the community [3].

Today, the existence of broader and more open transportation choices in both public and private companies presents the perfect opportunity for people to select the most suitable transport mode that meets their needs. Besides, as people's earnings increase, more people manage to pay for a taxi. Taxis provide customers with more efficiency, comfort, and convenience. Taxi is also significant in that it escalates peoples' freedom to do certain custom hobbies in various locations such as labour, shopping acquires, and relaxation hobbies.

## 2. LITERATURE REVIEW

Some of the famous/well-known apps which provide cab booking facilities are Ola, Uber, Rapido and so many more. Normally, these apps provide services to a common demographic of people. Swathi Baswaraju focuses on

providing services to the visually impaired in the form of an application that is instinctive to book cabs. The main motive behind this E-Cab Service is to provide voice-based transportation services which will ease the online booking of a cab for the visually impaired. For such people, day-to-day commuting is a huge burden, and there is a huge gap between their needs and the available technology that provides the service. The system breach into the process of developing an app that brings cab booking services to the fingertips of visually impaired people and hopes to bridge the gap between the visually impaired and other members of society [4].

This is achieved with the help of Text-to-Speech (TTS) for guidance and Speech-to-text (STT) input from the user this way the user will be able to book a cab based on voice commands, and the inclusion of UPI or Mobile wallets makes it easier for the payment transactions to take place. The various modules that have been used are the Login module, UI module, Payment module.

The problem with traditional taxi services is the difficulty of matching the taxi demand to its supply when there is no phone booking or other reservation system. From that perspective, the taxi driver's experience is important in reaching the next passenger [5]. A taxi driver's mobility intelligence is important in reaching passengers. Experienced taxi drivers have an idea about the locations and times of high-demand taxi stands or street sections. On other hand, a taxi driver with limited experience faces difficulty in reaching the next passenger. This causes drivers of vacant taxis to sail the road in search of passengers, which results in traffic congestion, air pollution, and resource waste.

The aforesaid studies primarily focused on the use of historical GPS data to study the factors that affect a taxi driver's mobility intelligence and as a result their choice regarding the best route and pickup location. Two significant contributions are made First, GPS trajectory data, open- and crowdsourced geospatial data (Foursquare check-in count and points of interest [POIs]), Google Distance Matrix API, and census records to enrich the set of variables available for modeling multiple aspects of taxi travel demand. Second, to study the location choice of taxi drivers for passenger pickup, we have developed a choice modeling framework based on a nested logit and an MNL model.

Described taxicabs transportation because it provides a comfortable, quicker, and secure journey for passengers. They design and implement the intelligent agents-based distributed cab system for serving passengers using local information. it is based on mainly two algorithms i.e. Algorithm 1: A distributed algorithm for bargaining. Algorithm 2: A distributed algorithm for cab gathering. They are describing the Manual cab booking system that requires the passenger to physically book the cab through the booking office which therefore provides the liberty and scope of bargaining at both ends. While in online mode, clients carry out booking either through phone or the Internet. All the bookings are query-based which is directed to the central server and followed by acknowledgment by the server.

Analyzes the basic idea of responsive web page design, the process, and key technologies of responsive web page development. The responsive website can adjust the page layout. Mainly describe adjusting picture resolutions according to the screen sizes of different hardware devices or browser windows. CSS3 can be used flexibly to implement mobile Internet websites by using responsive design patterns and HTML5 adds the viewport parameter to get the width of devices.

Described the consumers' view on the quality of call taxi service. it helps cab service providers in customizing their services to attract more customers and increase their market share. Safety features are provided in cabs. Quality features like payment of fares are made more accessible as users pay. Loyalty programs offered to customers and the general charges per kilometer are more attractive than others.

Sofija Djordjevic proposed application aims to contribute to the modernization of the taxi industry by harnessing the power of advances in information and communication technology [9].

Albara Awajan proposed an automated taxi booking and scheduling system for the taxis available in Amman. The system provides an appropriate, reliable, and safe booking for both taxi drivers and registered customers through mobile devices. The product was tested and authenticated under different simulation scenarios. The simulation thrived that the automated taxi booking and scheduling system has a clear impact on saving time and oil consumption for taxis.

Zhongmin Yao, Zhaopeng Long, and Qiang Li proposed the taxi intelligent dispatch system based on GPS, that improves the traditional Dijkstra scheduling algorithms by setting taxi maximum reasonable scheduling range. Experiments show that improved algorithms reduce time complexity and improve scheduling efficiency.

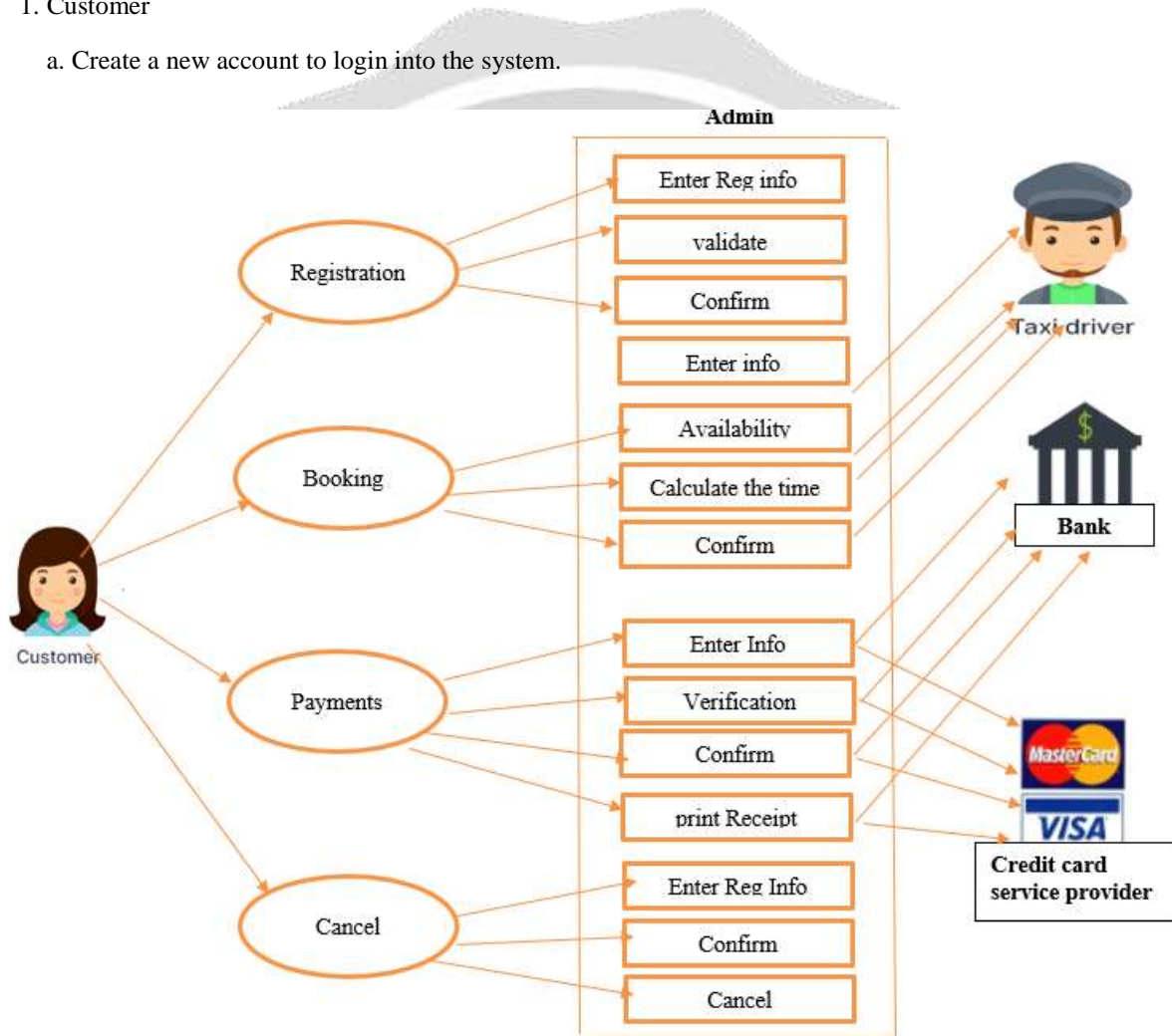
Meanwhile, the traffic jam information can be sent to the dispatch center and make the scheduling algorithm more rational by combining it with the above information.

### 3. PROPOSED SYSTEM ARCHITECTURE

As shown in Fig. the proposed system consists of four entities like a customer, taxi driver, admin, and payment gateway connected to the admin of the system. Each of the above entities of the system has its significance. These specific roles and functionalities of each are discussed below:

#### 1. Customer

- a. Create a new account to login into the system.



- b. Enter the booking information as per his/her needs.
- c. Make payment after a ride.
- d. Cancel the ride.

#### 2. Taxi Driver

- a. Getting all the information about the ride.

### 3. Admin

- a. Admin has the whole control of the system.
- b. Admin can control all the Working of the system.

### 4. Payment Gateway

- a. To make payment after completion of the ride.

## 5. CONCLUSION

People can use this system to rent cabs. Customers may use this online system to browse available taxis, view profiles, and book cabs. Taxi booking is a typical kind of transportation that is offered by several different transportation firms in a particular city. The bulk of people relies on taxi services for their daily transportation needs. The company must be 255 registered and fulfill all of the transportation department's requirements and security requirements. This paper determines an efficient taxi booking system. This project included a wide variety of topics, from corporate principles to computer science, and required the completion of many courses to reach the deadline.

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