

# Automated Vehicle Parking System

Ritu Boora<sup>1</sup>, Erum Sajid<sup>2</sup>, Mr. U Samson Ebenezar<sup>3</sup>

<sup>1,2</sup>Student, Galgotias University, Greater Noida

<sup>3</sup>Guide, Galgotias University, Greater Noida

**Abstract**— Everyone who owns or drives a vehicle in India or abroad, would be all too familiar with the hassles of finding parking spaces, parking attendants, inconsistent or monopolized rates and other problems associated with it. The aim of this standalone application is to automate the car/bike and the parking as well. It manages and regulates the number of cars/bikes that can be parked in a given space at any given time based on the availability of parking spot.

## I. INTRODUCTION

*A. Overall Description:* An automated parking system (APS) is an application designed to minimize the area and/or volume required for parking cars.

Automated vehicle parking system is a web based system managed to park a large number of cars/bikes in nearby parking area available. It is similar to Zomato like application. It helps to find the nearby space for parking and will reduce traffic. It is connected to Google map. This app will be open by unique id and password.

- Automated parking system: This app can be used by the person who needs to find parking area and the person who have parking space.
- If you have space in your house then you can allow person to park their car in your space and earn money.
- Suppose you have a one parking space in your building own by you but your are not in daytime .In this daytime somebody else can use your parking area. This will help both owner and user.
- This application is safe and secure. The person who allow to use their space for parking have to give their full detail.
- When driver open the app using their id ,he\she will get many option to park their car, they can chose according to their convenience
- This app will take date and time from the system automatically

- It will automatically calculate price on the basis of outtime and intima
- It will reduce traffic problem.
- It will reduce the risk of stolen of car.
- It also creates an opportunity to use your extra space and earn money.
- We know that parking area are also available in market. It will also find those space .
- It helps to maximize the space for parking.
- It create an opportunity for money earning. It will reduce traffic problem

## B. Purpose

The purpose of this paper is to figure out what is going on in the industry, in terms of automated vehicle parking system and what are the challenges that are or could be faced in the development or working phase of the standalone application.

For the process of automated vehicle parking system, many techniques were practiced. With the rapidly increasing urban population and improvements in living standards, the number of vehicles has increased dramatically. The rapid increase in urban car ownership not only increases the burden of urban traffic but also exacerbates the problem of insufficient parking spaces. The increased driving distance in the parking process increases energy consumption and exacerbates parking difficulties, which increasing the number of minor accidents, such as scuffing and collisions. At present, intelligent vehicles are the main development trend of the automotive industry and is the research focus of major domestic and foreign automobile manufacturers and research institutions. As a key component of intelligent vehicle technology, automatic parking technology has become a popular research topic. Automatic parking technology completes parking operations safely and quickly without a driver and can effectively improve driving comfort while greatly reducing the probability of

accidents during parking. In addition, the popularization of automatic parking technology can promote the development of automatic and intelligent vehicles

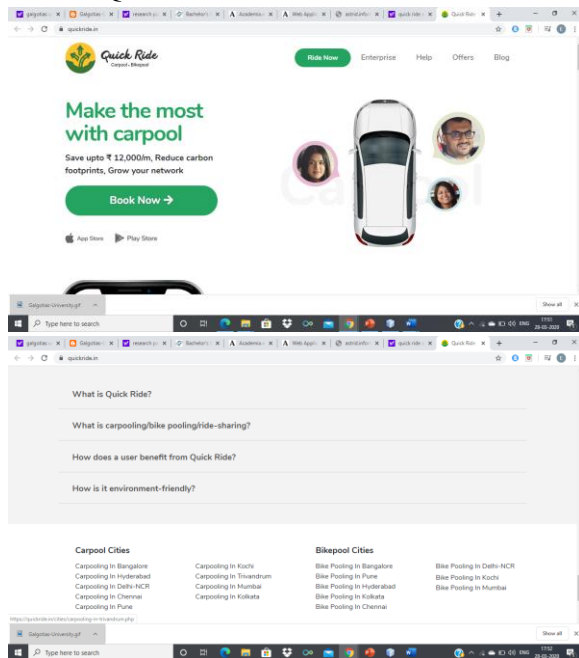
The main research challenges of automated vehicle parking model are as follows:

- 1 *Target Area*: Minimize the cost of the revenue for the valid time consumed by the client.
- 2 *Computational cost*: The heavy computational cost associated with mobile networks.
- 3 *Development*: The problem may include decomposing and distributing the processing elements, and then assembling solutions.

## II.LITERATURE SURVEY

I have researched on all application for this idea. Application like Zomato. But the main application that helps to create this idea is quickride used in our office.

### ABOUT QUICKRIDE APPLICATION



#### 1. What is quickride app?

Quick Ride is India's largest carpooling and bike pooling platform. The Quick Ride application facilitates ride-sharing by giving users a choice to either offer or find rides.

#### 2. What is carpooling/bikepooling?

In simple terms, carpooling/bike pooling/ride-sharing refers to sharing empty seats in a vehicle. People commuting from one point to another can share empty seats with other passengers who are travelling on the same route.

#### 3. How does a user get benefits from quickride?

Quick Ride is an application which allows users to share rides, share commuting costs, and reduce traffic and pollution, all at the same time.

A ride giver reduces his/her commuting costs by sharing fuel expenses with other passengers.

A ride taker gets to share empty seats in ride giver's vehicle and has a comfortable commute.

#### 4. How is it environment-friendly?

Quick Ride helps in reducing the number of vehicles on the road. Quick Ride facilitates the users to fill up the empty seats in already commuting vehicles that go empty