

# Vehicle Pooling System

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**Abstract:** Till today, most folks square measure tuned in to the automobile pooling system that is nothing however sharing an automobile with the aim of reducing the travel value, pollutionand congestion on roads. So, we have a tendency to square measure with the changed version of this concept that's the vehicle pooling system. Previously, pooling was restricted solely to cars, but using this application, it'll be extended to several alternative vehicles like motorcycles, trucks etc. Therefore, whereas victimization ride star, the user doesn't stay restrictedto solely cars. Since it's a social web based mostly application, therefore security is that the main focus. to beat this drawback,we've designed a special emergency feature into it and additionally thereto, the feature of rating the driving force is additionally out there in it so that supported the ratings, he/she will decide whether or not it desires to share a ride with the actual person or not. The admin can have the access to all or any the data relating to the passengers and also the sharer, and so there'll be less probabilities of any reasonably fraud.

**Keywords:** Pooler, Passenger, Destination

## I. INTRODUCTION

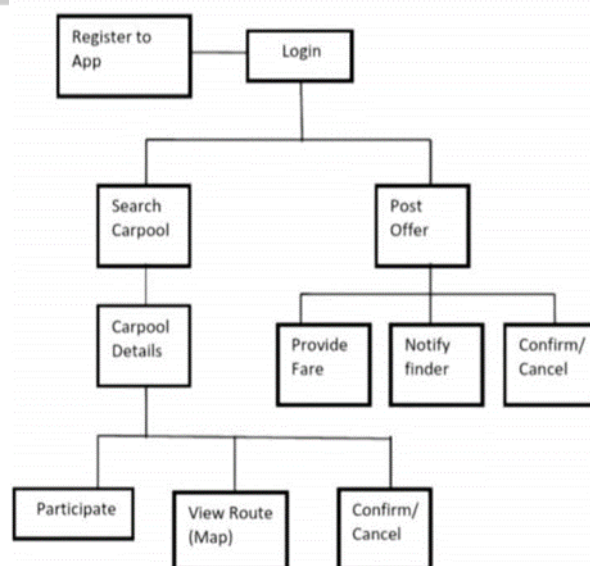
Transportation could be a major issue currently. One in all theforemost used means that of communication in roadways. One in all the foremost forms of road transport consists of thepersonal car. These cars square measure typically used with solely one rider. An over abundance of cars creates varied issues which incorporates increased traffic, increase pollution, parking congestion and many more [1]. Car sharingaims at finding this downside by targeting the empty seats within the personal cars. Staff of a similar space or the students progressing to a similar college will carpool. this will be done because the understand one another and might communicate. But when going on put down town trip you'renot aware if another person additionally intends to create a similar journey. Thus the applications helps you in seeing folks and journey schedules and build an call concerning does one want to travel alone or economize and travel with a securecompany [2].

## II. RELATED WORKS

Writing paper and Uber square measure a prosperous samplesof carpooling that provides cabs to the people. They work forone organization. One will book rides by visiting their application that accomplishes the objectives of the appliance[3].

## III. PROPOSED METHODOLOGY

Presently, this application is being designed for oneestablishment, but it can be dynamically utilized by alternative organisation conjointly. It follows the methodology as represented below [4].



**Fig. 1. Flowchart showing the working**

Login - Since all the operations which may be done apply theapplying needs each the actuation and aso the mortal unit required to

be logged in so all the operation might even be done apply this application.

Modify profile knowledge - All users will modify their profile knowledge. The profile knowledge contain: name, phone no., email, kind / color of automobile if any. The user will just edit these knowledge thus on be contacted and recognized.

Manufacture current steady ride - Chauffeur will manufacture distinct ride to be flaunted to the traveller after they hunted for the journeys. For doing thus, it's getting to gotta be compelled to mention the supply, destination and so the time of departure.

Book a ride - When a rider wants to book a ride then he/she can pick or choose a ride according to his suitability if that ride is available.

Rate participant - The mortal will rate the participant in line along with his expertise of ride share with him and he can even see the ratings he has done antecedently. Totally different persons whereas booking the ride can even see the ratings and book the ride in line with their comfort.

Cancellation of ride - Both the actuation and so the mortal will will cel their ride and so the others will get the notification.

Pseudo Code:

#### For Creating Ride by Driver

Step 1: Create a class named "Rides" in mainapp/models.py class Rides:

Step 2: Create its functionality in function named "create\_ride" in mainapp/views.py def create\_ride():

Step 3: First, we have checked that the user is logged in or not. If user is logged in, then we will allow to use this functionality. If user is not logged in, then he/she will directly redirect to login page

```
if(request.session.has_key('logged_in')):context['session'] = True context['logged_in'] = True context['type'] = request.session['type']
if(context['type']=="Driver"):
context['form'] = form else:
return HttpResponseRedirect('/login')
```

Step 4: We have created form in forms.py to render it in our html page for creating ride. form = RidesForm(request.POST)

Step 5: After, Rendering the form on html page, we will take input from user to create a ride and when the input is correct, we will generate charges for that ride.

form.Charges =

```
Areas.objects.filter(From=from1).filter(To=to).filter(Type= vehicle_type).values_list('Charges',flat=True)
```

Step 6: After generating charges, we will save whole data into database.

```
form.save()
```

#### For Booking Ride by Passenger

Step 1: Create its functionality in function named "book\_ride" in mainapp/views.py def book\_ride():

Step 2: First, we have checked that the user is logged in or not. if user is logged in, then we will allow to use this functionality. If user is not logged in, then he/she will directly redirect to login page.

```
if(request.session.has_key('logged_in')):context['session'] = True context['logged_in'] = True context['type'] = request.session['type']
if(context['type']=="Passenger"): context['form'] = form
else:
```

```
return HttpResponseRedirect('/login')
```

Step 3: We have created form in forms.py to render it in our html page for booking ride. form = P\_RidesForm(request.POST)

Step 4: After, Rendering the form on html page, we will take input from user to book a ride and when the input is correct, we will search for available rides according to the input. If the rides are available, then we will show them all details in html page. The user can click on read more button to view the details of driver and ride for requesting the ride.

```
x = get_ride(from1,to,date,time)
```

Step 5: After requesting the ride, now driver will accept/decline the request by logging into their respective accounts.

#### For Viewing Ride by Admin

Step 1: Create its practicality in operate named "rides\_view" in adminsite/views.py def rides\_view():

Step 2: First, we've checked that the user is logged in or not. If applicant is logged in, then we will permit to use this practicality. If user isn't logged in, then he/she can directly airt to login page.

```
if(request.GET.get('next')): temp=request.GET.get('next')else:
temp="/admin"
```

```
if request.user.is_authenticated:#functionalities
else:
```

```
return HttpResponseRedirect(temp)
```

Step 3: We can fetch all the rides from information named "Rides" for this date. If the rides found, then we are going to show all needed details in hypertext mark-up language page.

If the rides not found, then we are going to show a error message "No Rides Found" in hypertext mark-up language page.

#### For Cancelling Ride by Traveller

Step 1: produce a category named "RidesCancelled" in mainapp/models.py category

RidesCancelled:

Step 2: Create its practicality in operate named "cancel\_ride\_by\_p" in mainapp/views.py def cancel\_ride\_by\_p():

Step 3: First, we've checked that the user is logged in or not. If applicant is logged in, then we will permit to use this practicality. If user isn't logged in, then he/she can directly airt to login page.

```
if(request.session.has_key('loggedin')):context['session'] = True context['loggedin'] = True context['type'] = request.session['type']
if(context['type']=="Driver"):
return render(request,'mainapp/cancel_ride.html',context)
else:
return HttpResponseRedirect('/login')
```

Step 4: We can fetch all the rides from information named "Rides" for this date.

If the rides found, then we are going to show all needed details in hypertext mark-up language page and show button to cancel the ride by traveller. If the rides not found, then we are going to show a error message "No Rides Found" in hypertext mark-up language page.

```
Ride = Rides.objects.filter(Date__gte=today).all()
```

```
uid = get_UserID("Passenger",request.session['username'])d=[]
for i in Ride: if(checkPassengerIDS(i.PassengerID,uid)):x=[].append(i) x.append(get_Username("Driver",i.DriverID))
d.append(x)
if(d==[]):
```

```
context['values'] = 'NotFound'else:
context['values'] = 'Found'context['details'] = d
```

Step 5: When user click on cancel button, we are going to decision one operate "cancel\_ride\_btn" in mainapp/views.py. This operate contains the practicality to delete the ride for him/her.

```
Request = Rides.objects.get(id=pk)
```

```
uid = get_UserID("Passenger",request.session['username'])data = remove_uid(Request.PassengerID,uid) Request.PassengerID =
knowledge
Request.save() print("ID Deleted")
return HttpResponseRedirect('/cancel_ride')
```

IV. RESULT ANALYSIS

Here square measure some screenshots to relinquish a read of however the applying works.

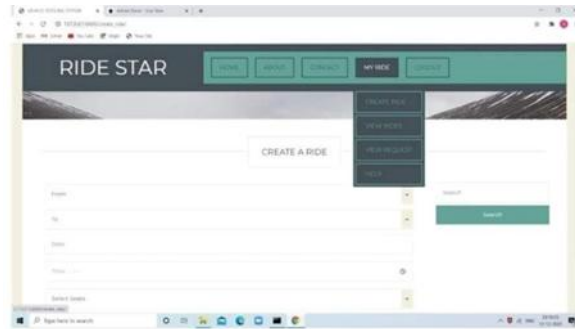


Fig. 2. Pooler login page

Pooler Login Page - When the pooler will login, he would be able to create a ride, view all the rides he has booked and also he would be able to view the requests which he had received from passengers who want to share a ride with him. While creating the ride, he will have to mention the source, destination and other details such as date, time, number of vacant seats, etc. In case, it requires any help, he can request for help by clicking on the help section.



Fig. 3. Passenger login page

Passenger Login Page - The above page will be displayed as soon as the passenger logs his account. A number of options are available to him/her such as book ride, through which he would be able to book the ride. By clicking on view rides, all the rides booked by him/her will be displayed to him. He can also rate the driver and view his/her notifications in the notification section. The help section has same work in the case of driver as well as the passenger.

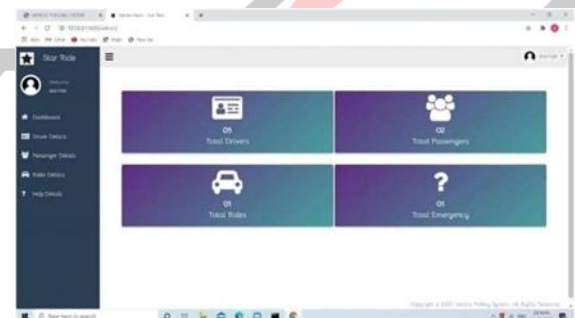


Fig. 4. Admin login page

Admin Login Page - This is the view of admin page. He/She is able to access all the information in the form of table, such as, driver details, passenger details, rides details, Total number of emergencies, help details, etc. This shows that the admin has a full control over the application and there are no security related issues.

## V. PERFORMANCE ANALYSIS

TABLE I. DETERMINING ACCURACY OF WEB APPLICATION

S. No.	Request	No. of Available Cars	Actual Outcome	Expected Outcome	Accuracy(in %)
1.	University-Miet	10	5	7	71.42
2.	Begum pul-Miet	7	5	6	83.33
3.	Shastri Nagar-Miet	12	7	10	70
4.	Metroplaza-Miet	9	5	7	85.71
5.	Partapur-Miet	8	6	7	80
6.	Ganganagar-Miet	7	4	5	83.33
7.	Modipuram-Miet	8	5	6	75
8.	Tejgarhi-Miet	9	6	8	71.42
9.	Abulane-Miet	6	4	5	80



Fig. 5. Performance Analysis Graph

## VI. CONCLUSION

We have projected the vehicle pooling system for our organization. Carpooling system is extremely effective meansthat to scale back pollution and also the congestion of vehicles in cities. It also provides associate degree eco- friendly thanks to travel. It conjointly provides associate degree opportunity to satisfy new folks. As these days most of the people like private vehicle to travel because of delay caused publically transport system and luxuries provided by non-public vehicles [5].

Pre-registration ensures that solely known folks get into the vehicle so trust will be established. The people registered square measure assigned specific days on that they must taketheir non-public vehicle, so no inconvenience is caused to itsregistered passengers for daily commute. So the planned carpooling system are going to be effective in reducing surroundings pollution [6].

## REFERENCES

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