Ride Sharing App

CMPT 475/6
Fall 2022

1 Introduction

You have been hired by Marist College to develop an application that students can use to share rides to different destinations. For example, if I need to go to the Target on any given day, I can find other students who also need to go to Target and share an Uber or take a ride with another student who has a vehicle and is going there.

The requirements provided below are very high-level on purpose. Part of your responsibility is to create detailed requirements for the project by submitting questions or meeting with the client (Prof. Arias). You'll have to make certain architecture and design decisions. When you do, make sure that you keep the client informed and update your requirements document.

2 High Level Requirements

2.1 User Interface

This type of application is more useful as a smartphone app. If you feel like it would be too difficult for you to implement it as a smartphone application, you can instead implement it as a web-based application. However, the technical merits of such an interface would be less. One alternative is to create a web-based interface that also works with a smartphone.

Your interface should allow a user to:

- Create an account (this will be separate from the Marist login because it is too cumbersome to integrate with Marist authentication). You should let users use another authentication as a way of registering and accessing the app, i.e. Google, Facebook, etc.
- Manage account information.
- Select a destination (with a map).
- Select a date range and a time range of the desired trip.
- See the upcoming trip requests from all users.
- Manage my upcoming trip requests.
- Message other users using the app. Users will appear with a generic username or an alias that they have selected, but no other identifiable information will be displayed.
- Mark a trip as taken and the mode of transportation, e.g., Took a ride with another student, Drove one or more students, Took an Uber with other students, etc.
- Filter trips by destination and time.
- Mark destinations as favorites.

2.2 API

Your system should collect statistics about the trips that have been completed and requested, and should provide an API that allows for querying such statistics.

2.3 Performance

No screen in your interface should take more than 3 seconds to render the data. Your universe of users is Marist's student body. However, you should account for the possibility of expanding it and making the application available in other schools around the nation.

2.4 Technology

You are free to select your technology stack.

You will be provided virtual machines that you can use to install and develop your application. If you prefer, you can get your own cloud machines, e.g. Google Cloud, and use those.

3 Project Management

I recommend that you find a project management tool online that you can use to track your project plan, e.g., Trello, ZenHub, etc.

Track your code in GitHub and share your repository with me.

4 Resources

The following are some resources that your can use. It is not an exhaustive list, and you are not required to use any of these:

- Google Maps
- Open API Specification
- Trello