

# Frontier

## Overview:

The Conceptual Design shows the problem statement, product objectives, major features as well as the overall interactions. Also, we included the architecture diagrams and sample screenshots of the working prototype.

## Product name:

We are team Frontier, enrolled in CMPE 131 for Spring 2017. Our goal is to develop an easy, efficient, and simple web application for users to rent a car and for owners to offer their own.

## Problem Statement:

The most used transportation mode today is the car, but 95% of the time they are just parked. Our goal is to reduce the number of cars on the street, aiming for a better tomorrow. In order to achieve this goal we created this car sharing platform which lets multiple people use one car, wherever they are, for purposes like vacation or business trips. Being able to choose the exact car you like without hidden costs makes the experience seamless.

## Product Objective:

We are a platform that acts as an intermediary between car owners and renters. It is designed to meet the specific requirement of the users looking for easy to use and affordable rental cars. With this application, users do not have to go through all the paperwork, making it an easy experience for renters and car owners. For car owners, they need to register their cars by giving full detail (license plate, type & years of the car) in order to rent out to the customers. On the other hand, the renters need to register before they can rent a car. This application is easy, efficient, and affordable as possible for renters to rent cars online within a few clicks.

## Major Features:

- Easy navigation on all devices, desktop, mobile and tablet
- Simple navigation and usage of the site
- Dynamic databases with users and cars
- Filters which can be used to define search criteria
- Queuing System
- Interactive Map View

## Overall Interaction:

New users enter the homepage (Figure 2) and will be asked to register for an account with their information such as name, phone number, address, email, and driver license number in order to rent or list a car (Figure 4 and 5). Once the users have registered, they can search for the car they wanted on the website (Figure 3). The sorting algorithm will allow the users to sort searching based on the user's criteria such as car type, model, number of doors, etc. Based on the user's

preferences, the app will be able to use matching algorithm to identify the right vehicle that matches the user's search. The queuing system works with user's search and other updates that allow to prioritize users who have reserved a car first, in the order that the reservations were placed based on a "First-Come First-Serve" concept. The function of the queuing system allows the first customer to register for a car before a second user allows to make a reservation. Also, the interactive map view will allow users to have a search view that have the option to switch between a list view and an interactive map (Figure 3), which places pins at the location of the cars that is currently available for rent. A high-level architecture diagram (Figure 1) depicting the overall and different interactions is shown below.

### High-Level Architecture Diagrams

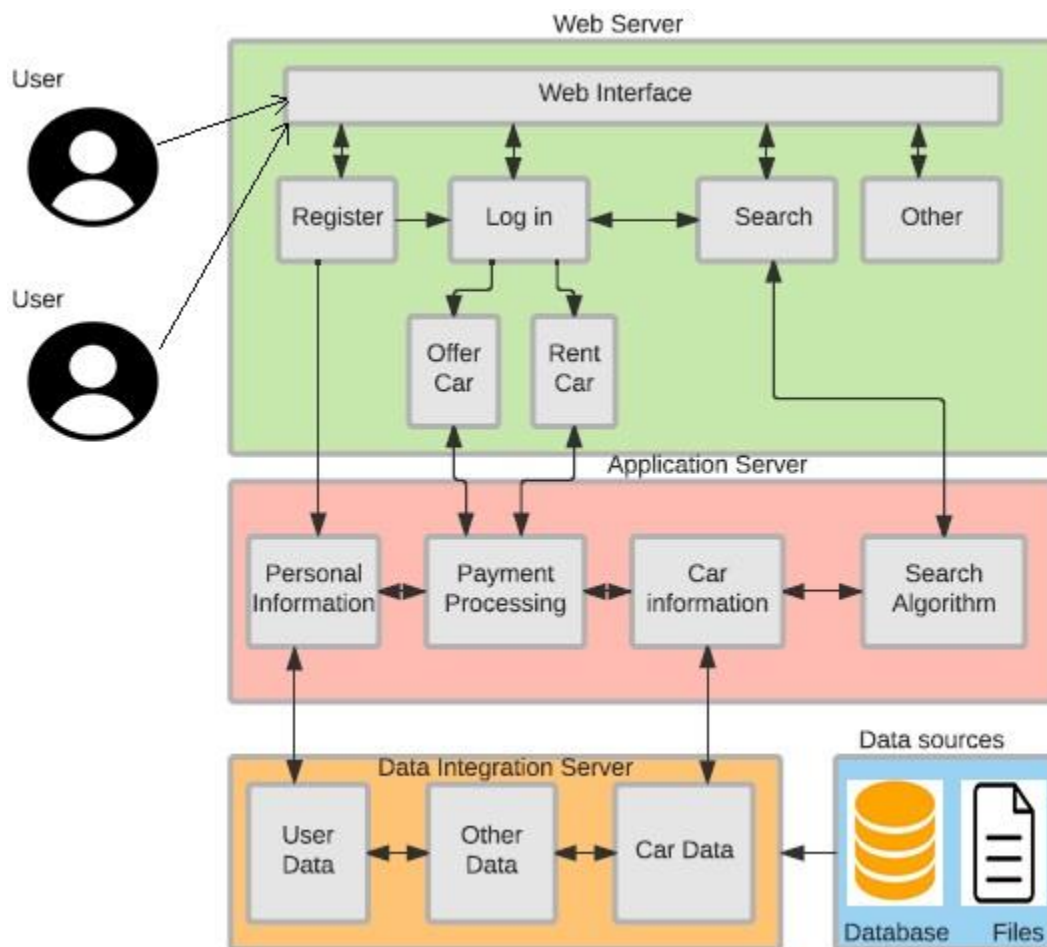


Figure 1: High-level Architecture Diagram

## Screenshots:

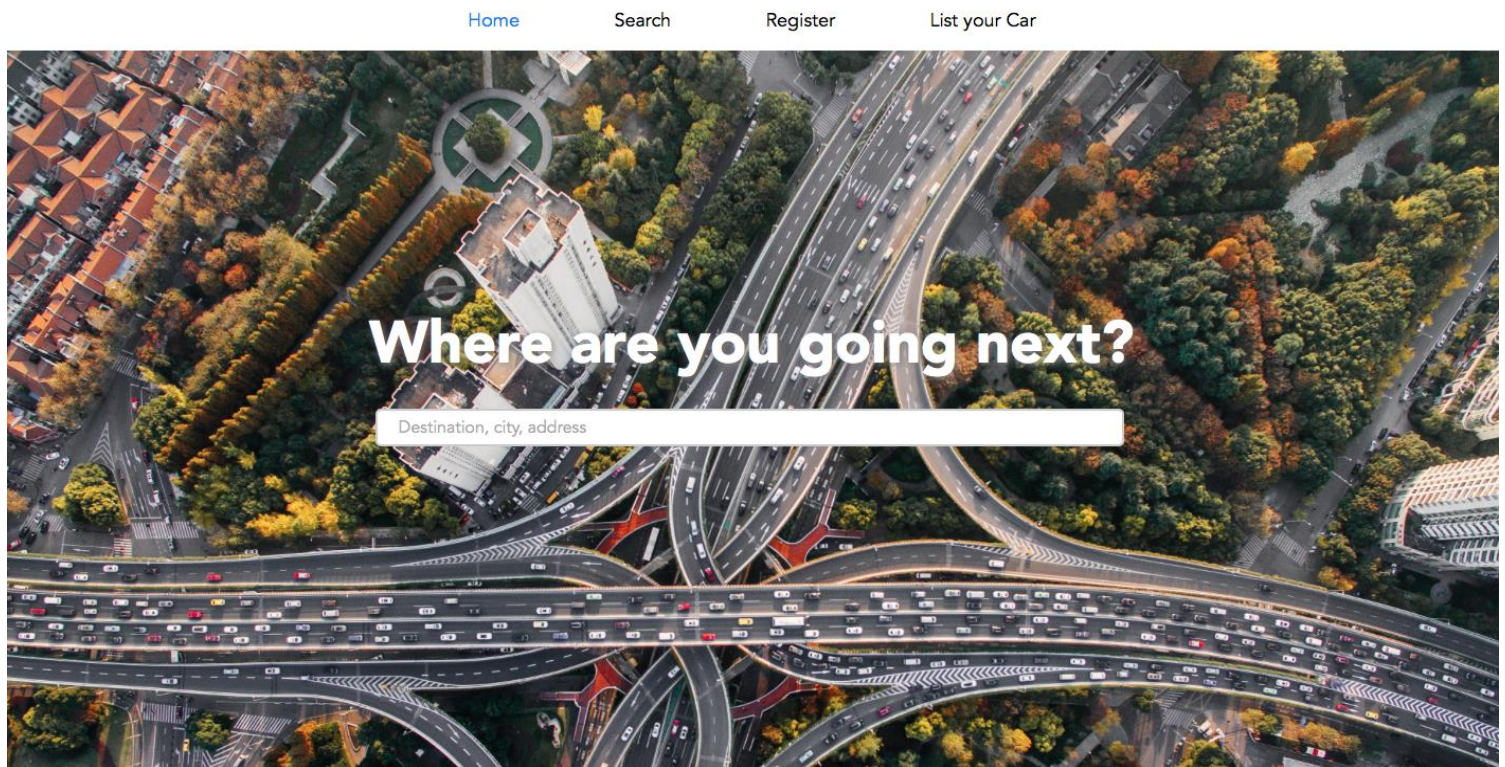


Figure 2: Home Page

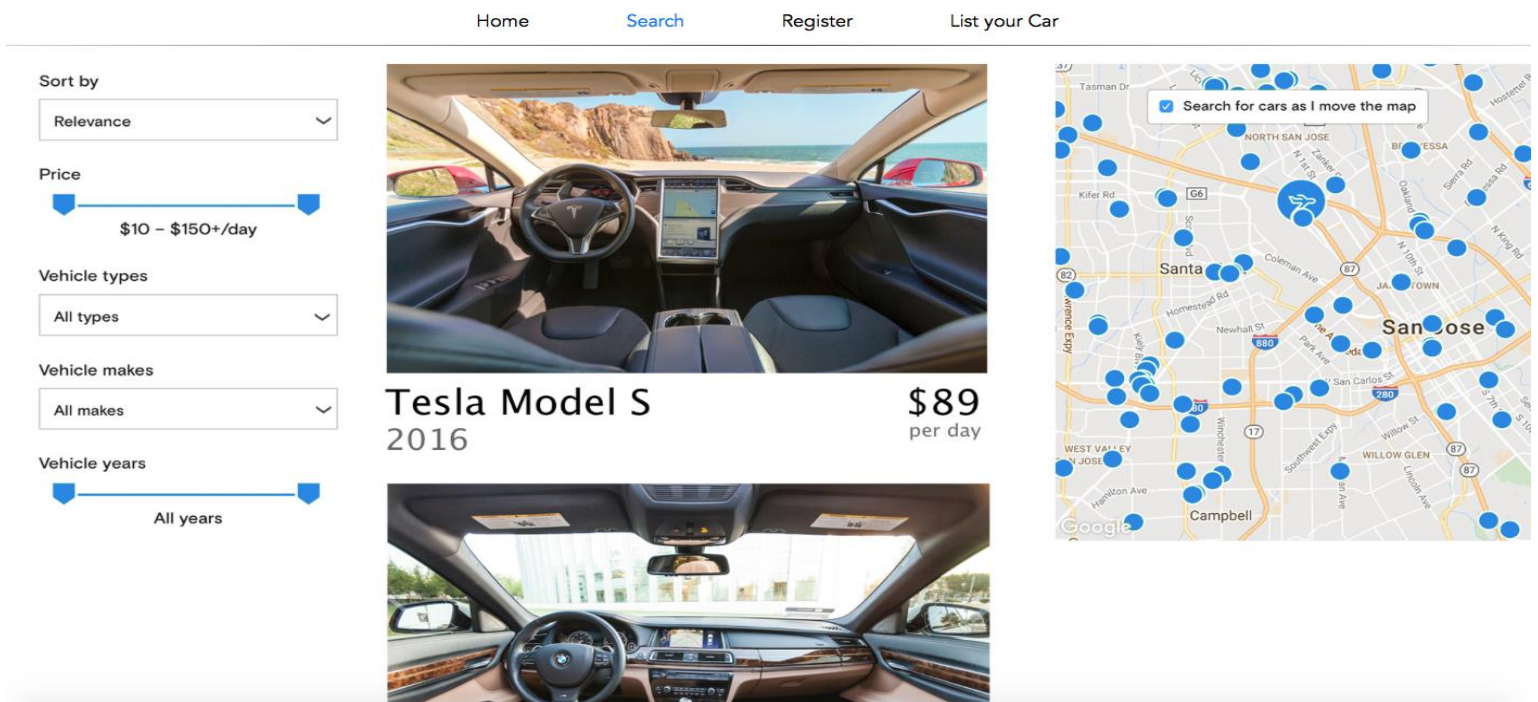


Figure 3: Search View with Interactive Map

## New User

First

Last

Street

City

Country

Drivers license's #

Create User

[Back](#)

Designed by [Frontier Car Rental](#)

Figure 4: Registration

## New Car

Licenseplate

Make

Model

Category

Doors

Create Car

[Back](#)

Figure 5: List your Car