SMART PARK

"RU Ready to Park Smart?"

Demo 2: User Documentation

Github: https://github.com/swetha-5689/SmartPark

Group 3

Disha Bailoor, Neha Nelson, Param Patel, Swetha Angara,
Nicholas Meegan, Thomas Murphy, Charles Owen, Jeffrey Samson,
Aniqa Rahim, Brian Ogbebor

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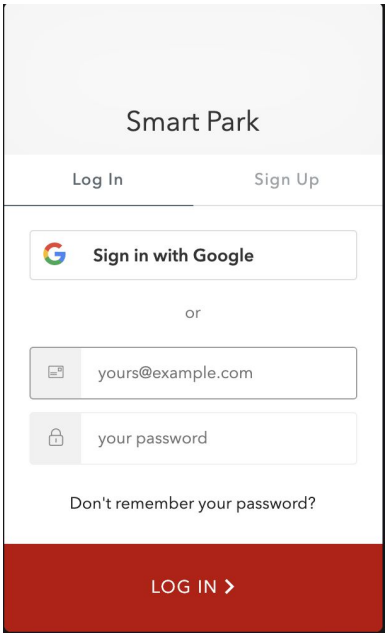
Customer Group User Documentation

Welcome to SmartPark! Here the user can login or create an account for the SmartPark website. To Run the front end proceed to this link: https://boiling-river-38785.herokuapp.com/

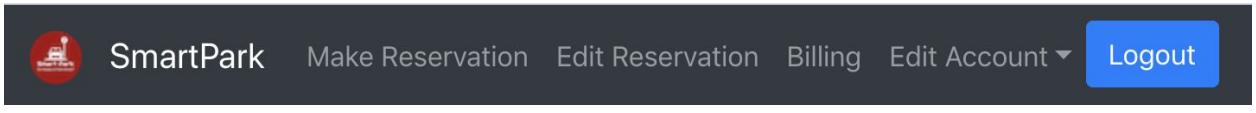
Signup

Put in an email and password to be able to login.



Login

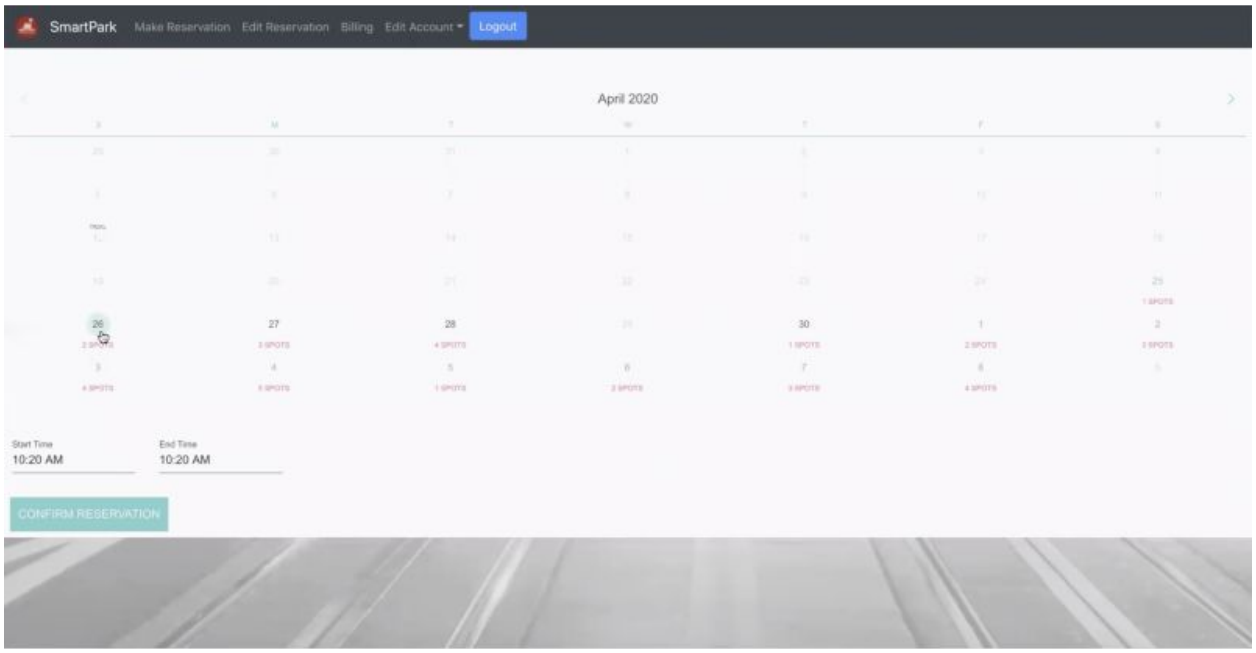
Once they are Logged in, the user can now access their account where they can make/edit reservations, edit their account in which they can add new vehicles, credit card information and change account password and pay off their bill.



Reservations

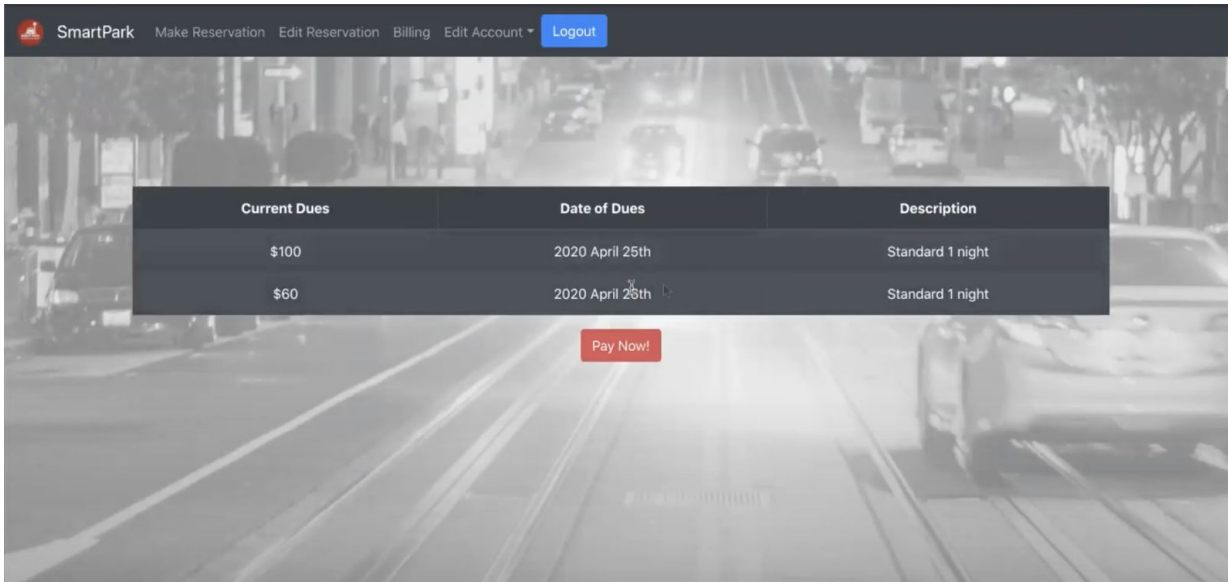
The User can click on the ‘Make a Reservation’ button. This page is not completed yet, however, the user can scroll through months and select a date. After the pages are integrated with the back end, the user should be able to choose a date, enter the start and end time to make a reservation that will all be saved

In order to Edit a reservation, the user should be able to access the reservations they have created and be able to change the date and time for each specific reservation. You can also delete specific reservations.



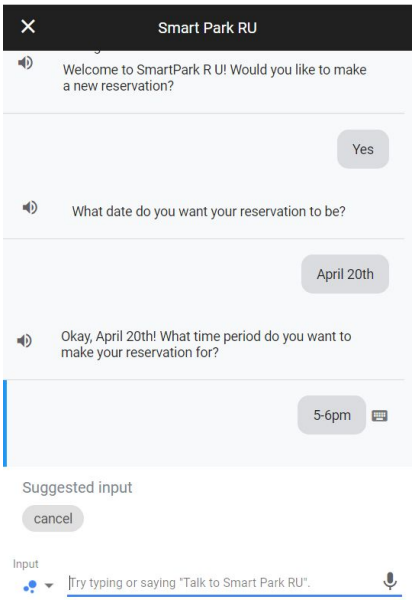
Billing

For the Billing page the user should be able to see the total amount owed. They can enter their credit card number CVC, and expiration date and click Pay Now. Once the amount owed is successfully paid the user should receive an email confirmation.



Google Assistant

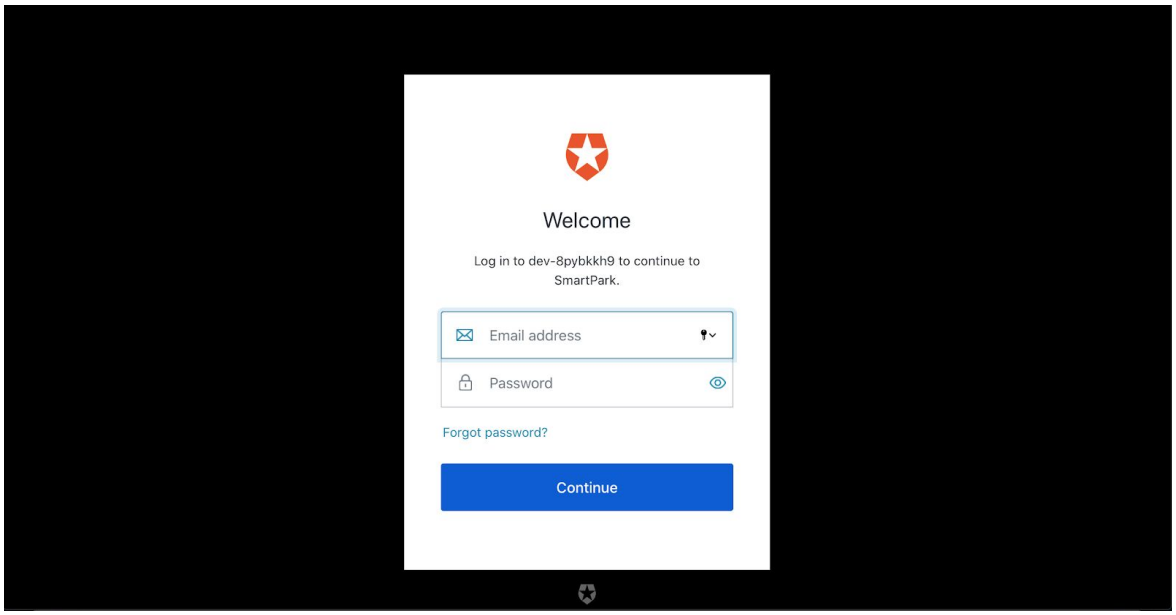
The User can create reservations hands-free using any Google Assistant smart device. The User tells SmartPark the date of their reservation and the duration of their reservation. SmartPark confirms your reservation by repeating it back to you.



Manager Group User Documentation

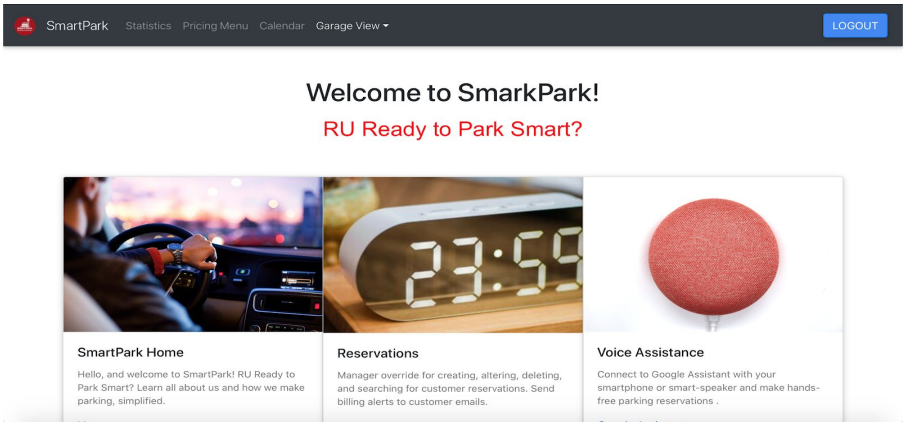
Login

First a manager is required to enter their login credentials.
Example:
Email: jeffrey@example.com
Password: SmartPark2020



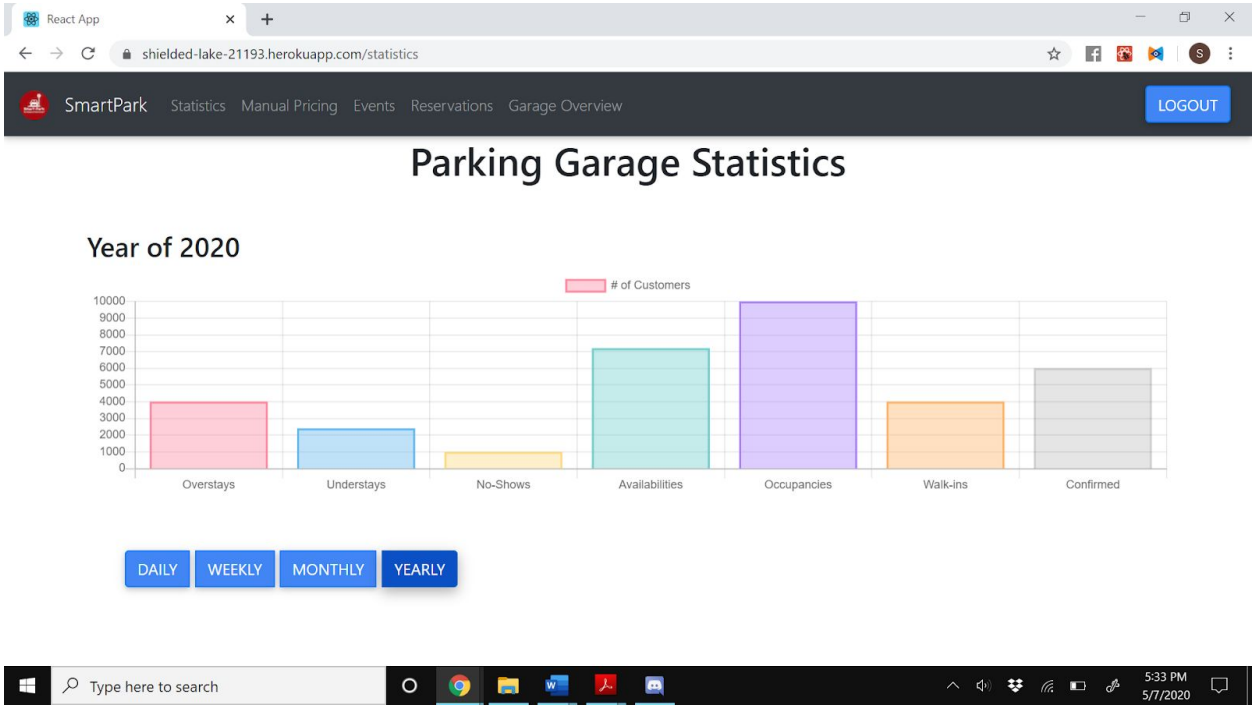
Home Page

Once a manager logs in they will be directed to the home page where they can go to other pages with other features.



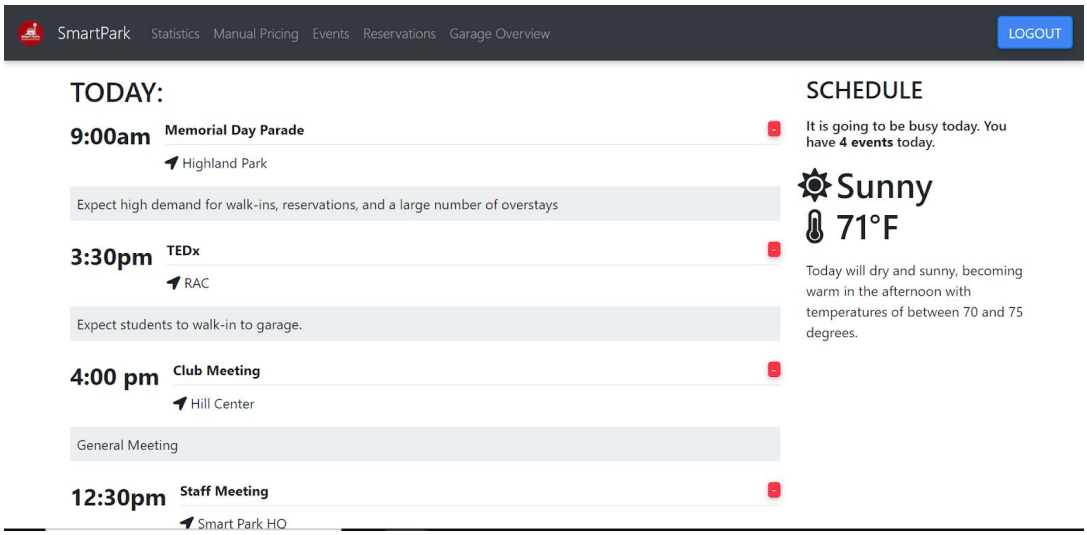
Statistics Page

This is our statistics page and here you can view business statistics on a daily, weekly, monthly, and yearly time frame. You can also search for a specific data range to get a more accurate and relevant business model.



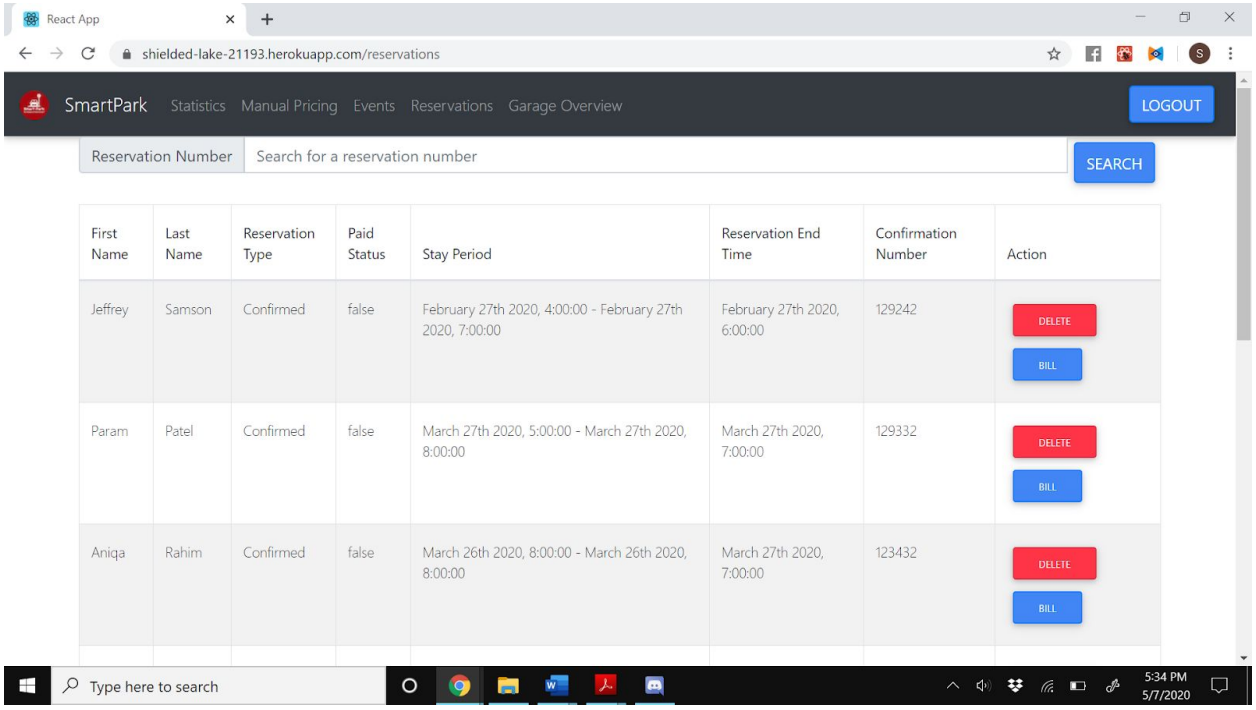
Events Page

Our events page can store events that would require parking and probably cause an influx of business. Also, you can have events related to your business such as staff meetings.



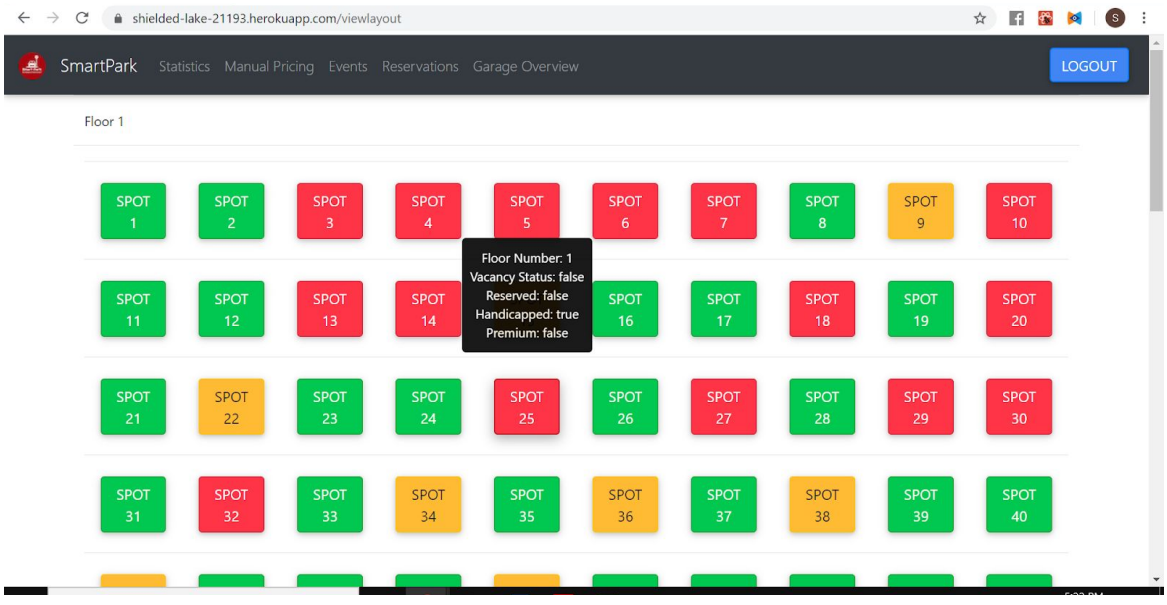
Reservations

The reservations page allows the manager to see the current scheduled reservations and customer details like name and type of reservations etc. Here we can physically bill or delete reservations.



Garage Layout

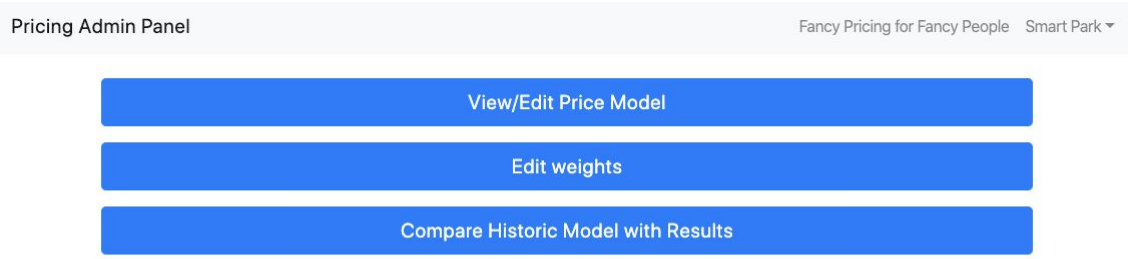
This page allows the user to see the current status of spots in the database. It includes a color scheme that allows the user to determine which spots are currently reserved, vacant, and occupied.



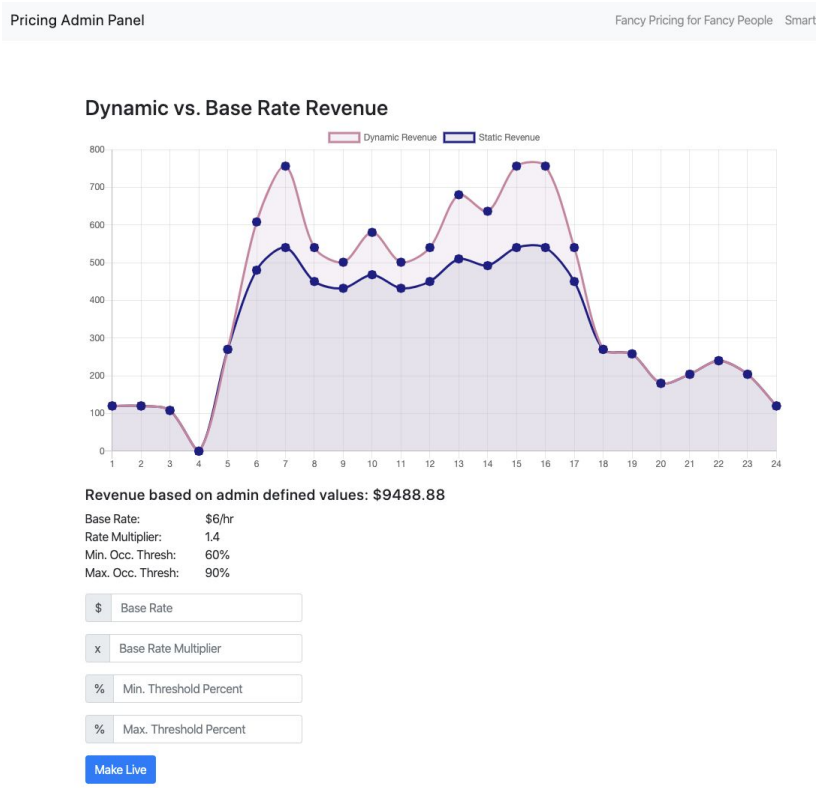
Pricing Admin Panel

View/Edit Live Price Model

Welcome to the Pricing Administration Panel. Here, you can update the Live Price Model for your garage. The price model is intended to be an easy to understand, easy to use function to incorporate dynamic pricing principles into your parking garage rates and fees.



Under the **View/Edit Live Price Model** option, you'll find access to the user defined fields you'll use to define pricing and a simple graph that displays projected revenue.



The premise of the model is that you, the administrator of the system, may enter your standard hourly parking base rate first. This is the value from which all subsequent inputs work off of. So, if the normal hourly rate for parking in your garage is $6/hr. That's the rate we'll start off entering in that field. You can always come back and change this value after you've experimented.

The base rate multiplier will determine the maximum rate that you would ever like to charge as an hourly rate. For instance; if your base rate is $6/hr and you would like to charge a maximum of $8.40/hr when the garage is starting to reach capacity, you would enter a multiplying factor of 1.4.

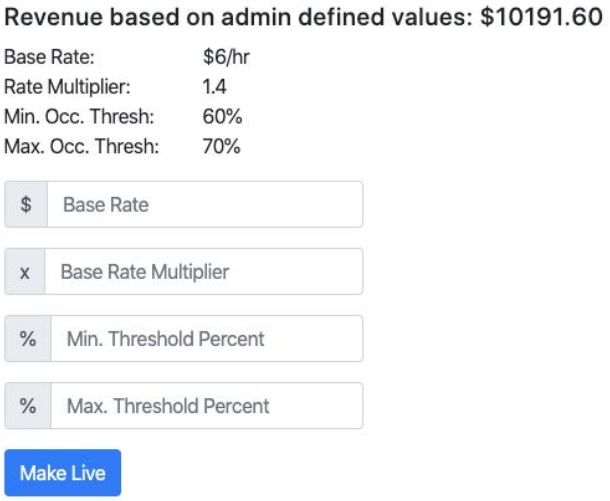
Ex: Base Rate * Multiplying Factor = Maximum Rate Charged
Ex: $6/hr. * 1.4 = $8.4/hr

Next, you can set the threshold values. The minimum threshold is the percentage of occupancy you want to wait for before the dynamic pricing "kicks in". For instance, if you don't want to charge a higher rate until the garage is at least 60% occupied. You would enter the value: 60, into this field.

The maximum occupancy threshold is the percentage of occupancy you would like the maximum rate applied to. For instance, if you want the maximum rate applied to those parking when the occupancy is 70% and above you would enter the value: 70, into this field.

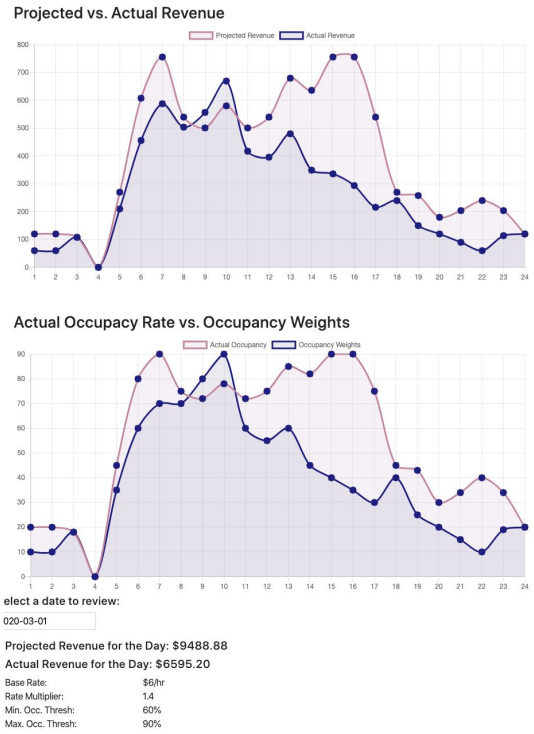
The rate will scale from base to maximum over the range of occupancy between the two values you input and stop scaling thereafter.

The described inputs are shown as an example below.



Compare Historic Model with Results

As the administrator you will want the ability to view the historic results of your price model. This feature is found by pressing the **Compare Historic Model with Results** button.



Under this portion of the Pricing Admin Panel you will find a simple “date picker”. Clicking on the date picker will bring up a calendar. On this calendar you can easily select the date of interest.

After selecting the date you’d like to see historic price model performance for the graphs and revenue fields will automatically populate. The first photo of this section is an example of what you will see.

The top graph presents you with an overlay of the projected revenue for the day in question along with the actual revenue the garage generated on that same date. This projection was created with the values you input for the price model. The graph charts revenue in dollars on the X axis and hour of the day on the Y axis.

The bottom graph presents you with an overlay of the actual occupancy percentages by hour and the assumed occupancy weights on the date in questions. The occupancy of the garage in percent is charted on the X axis, and the hour of the day is charted on the Y axis.

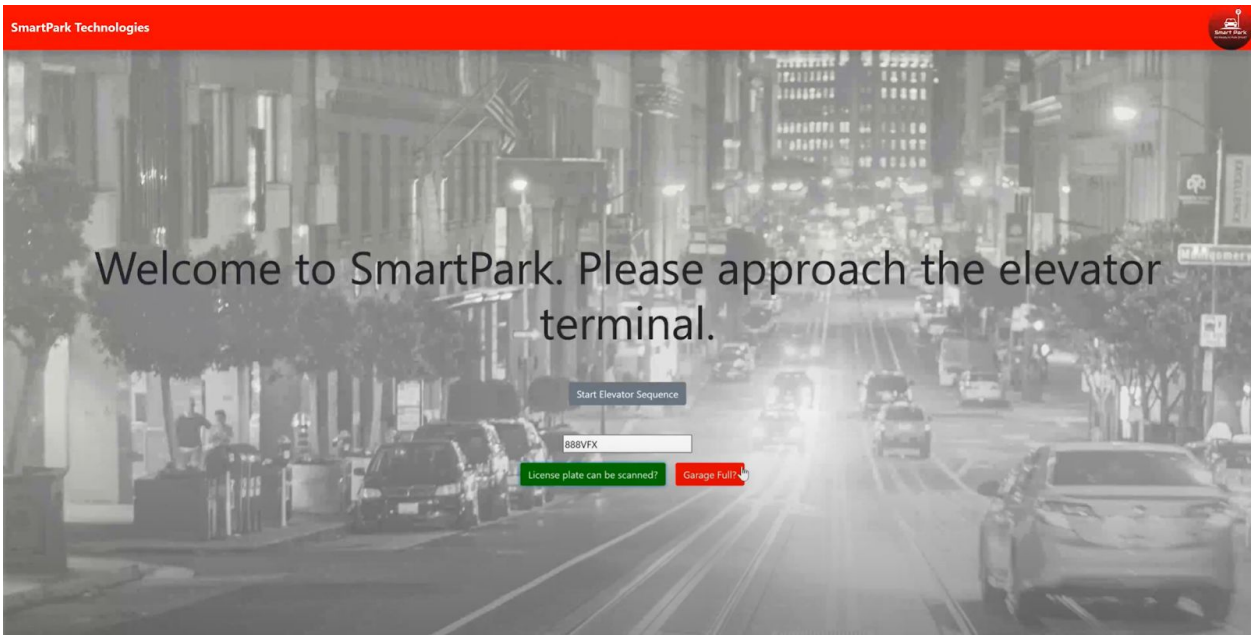
Elevator Group User Documentation

Elevator Terminal

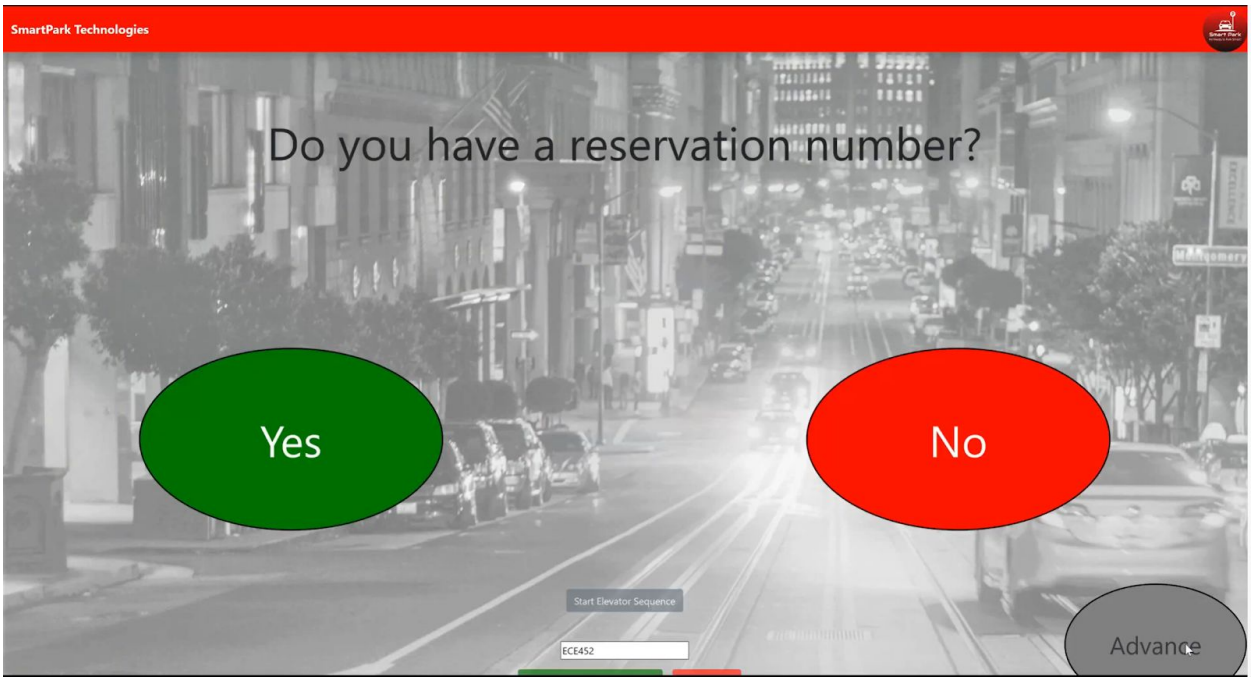
In this brief user documentation, a walkthrough of necessary components and how to use the SmartPark elevator system is gone into detail.

In order to begin using the front end of the elevator terminal, four devices need to be connected: the camera in the elevator, the back end software, the weight sensor hub (which connects all of the weight sensors together in one spot), and the license plate scanner in the elevator terminal. If these devices are not connected, a boot failure screen will display. To advance to the main elevator terminal, please ensure these devices are connected. (If you are using developer mode, press the respective buttons in order to advance the screen. See the “dev mode” or “demo mode” section of the documentation for more details.)

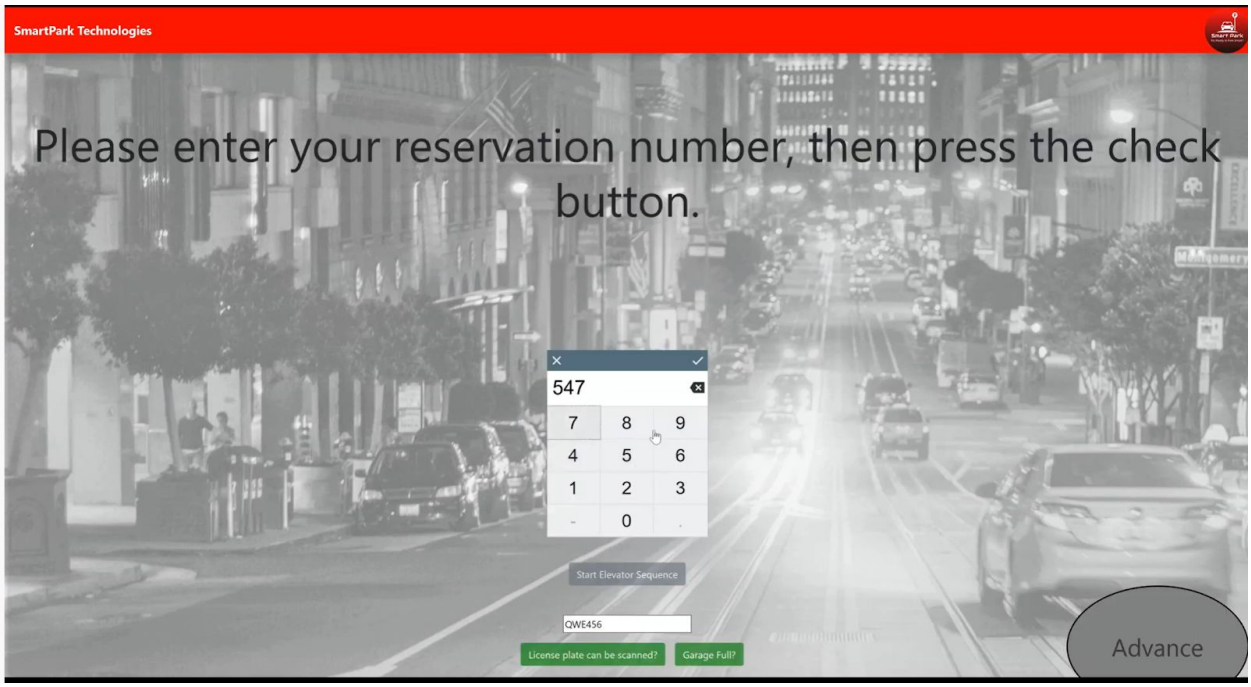
After the devices are properly connected, the main elevator screen is displayed. Once this screen is displayed, using the camera, the elevator terminal system begins searching for vehicles that are going to enter the elevator terminal. When a vehicle is found, the customer is prompted to enter the elevator. From there, the elevator terminal scans the license plate of the customer. If the license plate scan is successful, then the success is displayed and a reservation number is searched for through the database for that license plate number. If the reservation is found and the garage is not full, the customer’s spot is displayed on the screen and is taken to that floor. The elevator then returns to the ground level, ready to accept another customer.



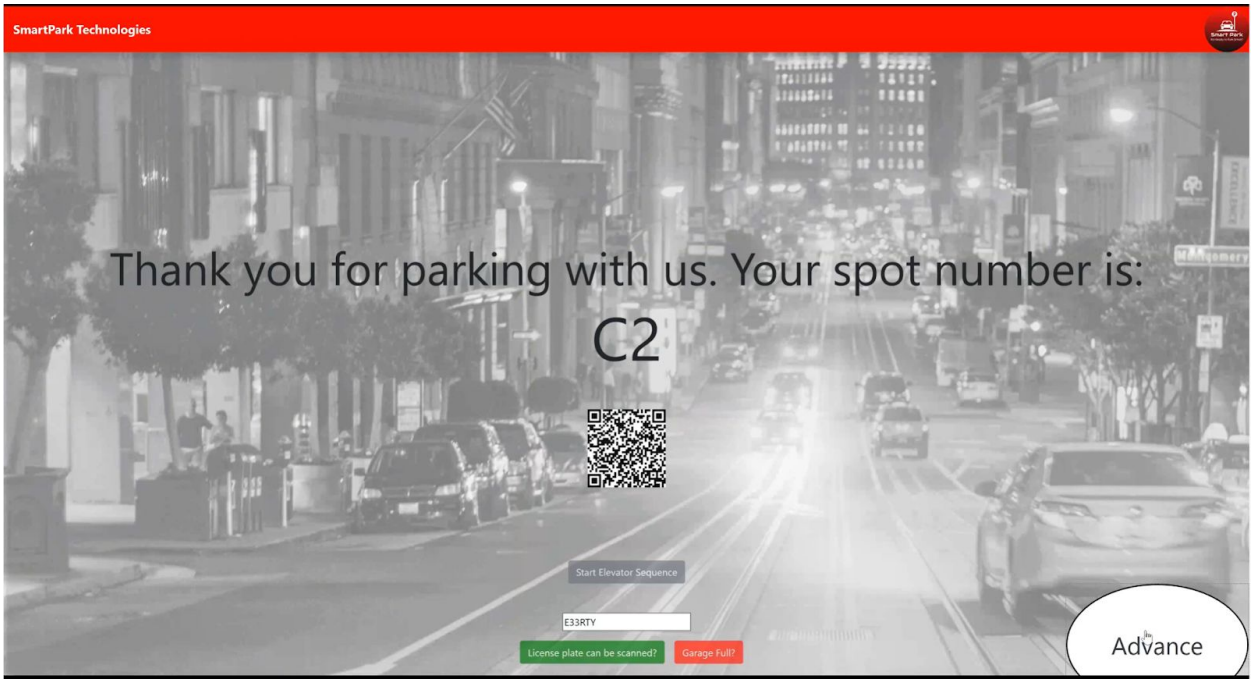
However, if the license plate could not be scanned, then the customer is asked whether they have a reservation number or not. The reservation number is a unique number given to the customer when the reservation was made.



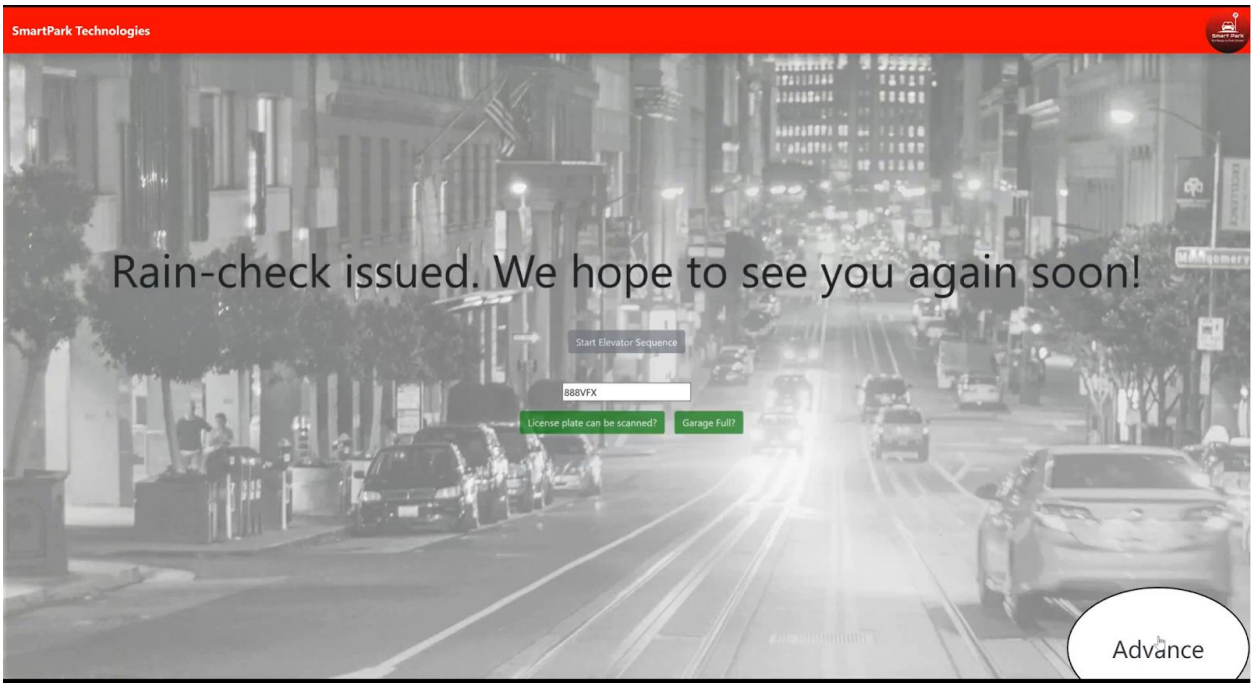
After being prompted, the customer has the choice to enter the membership number if they have one or exit the elevator to create an account on the walk-in terminal. A reservation is then searched for using the reservation number.



If the reservation number associated with the scanned license plate is found, or if the reservation number that is entered into the system is found, the user will be directed to their spot number.



If the garage is already full but the reservation number was found, the user will be issued a rain check.



If the user has its license plate successfully scanned but does not have a reservation ID found in the database, or if the user enters a reservation ID manually but it is not found in the database, or if they say they do not have a reservation ID, they will be asked to leave.