# Project Overview

## Parking-Pal

Parking at SMC is a huge problem. Often there aren’t enough spaces, and students are late to class because of parking related issues. Students often face frustration at purchasing parking passes, only to resort to using metered parking or parking long distances from the school. Solving this issue would allow students to find parking with ease, stress less about getting to class, and allow them to focus more on the material than on transportation. The app gives the location of available parking spots within the school parking lots and offers navigation to the nearest one.

Parking pal will draw on the publicly available API offered by the city of Santa Monica. Using a series of commands and screens, users will not have to drive in circles for hours or park in the narrow aisles waiting for a space to become available, users will be able to simply drive to their parking space, park their car, and continue on to class. Parking-Pal also features a notification system that alerts nearby parking space seekers when someone will soon be leaving.

Parking pal not only locates available parking spaces within the parking lot, but also finds available parking meter spots as well. Parking pal is able to keep track of the time left on a meter, remotely add money to the meter, and alert nearby parking spot seekers of an expired meter that may soon be empty.

While the parking-pal offers these services, various metrics will be taken that help identify which spaces are the most available and which are most occupied, times of day, and in conjunction with Google Maps and Waze, data on how parking influences traffic.

# Options and Selections

## Open the App:

When a user opens the app, they will be presented with a button and the words

“Find a spot!”

or

“My spot”

## Find A Spot:

The next screen comes up listing the all of the available spots nearby and listing the spot most likely to be available given the current traffic and parking data for the time. A visualization of cars parked in the parking lot will populate the screen. The cars will be of varying colors based on a combination of statistical data of the duration of parked cars, as well as user data from other users using this application. A list of available parking spaces is presented to the user and ranked from most likely to least likely to be available by the time the user arrives. Parking updates will be presented to the user as the user navigates to one of the available spots.

## My Spot:

After parking, the spot the user takes will be changed from available to occupied. New options will be available after parking. Basic information on the parking spot will be shown to the user, such as remaining time on a meter, local street sweeping schedules, and parking lot parking rates.

### Find My Spot:

The user will be presented with a map and navigation steps to relocate their car.

### Meter Top Up:

If the spot the user parked is a metered spot, the option to add money to the meter will be available. This option is limited to the time limitations posted on the meter.

### Leave My Spot:

Users can alert nearby spot seekers that they are leaving.

## Panic Button:

On most screens, a panic button will be available that will alert the police to the users location and navigational data in the event of an incident. This helps to ensure the user base is safe and secure even on dark nights and while traveling alone.

## User Profile:

Users will be able to include their personal information and also a profile picture of their choice. Users will also be able to sync their Parking-Pal account to their SMC account and purchase parking passes for the parking structure.

All payments will be processed with Google Wallet, Apple Pay, or Square.