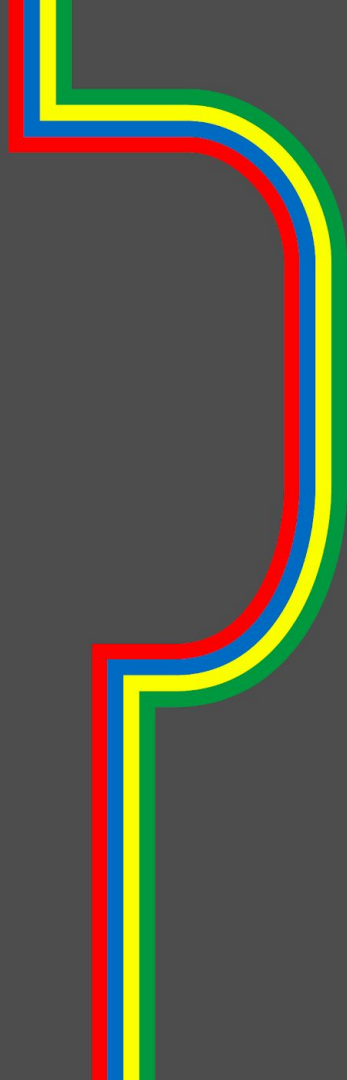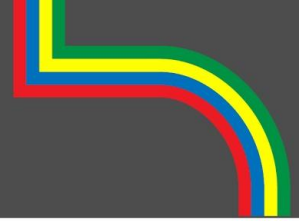# PARK IT

Valerie Chou
Diego Lopez
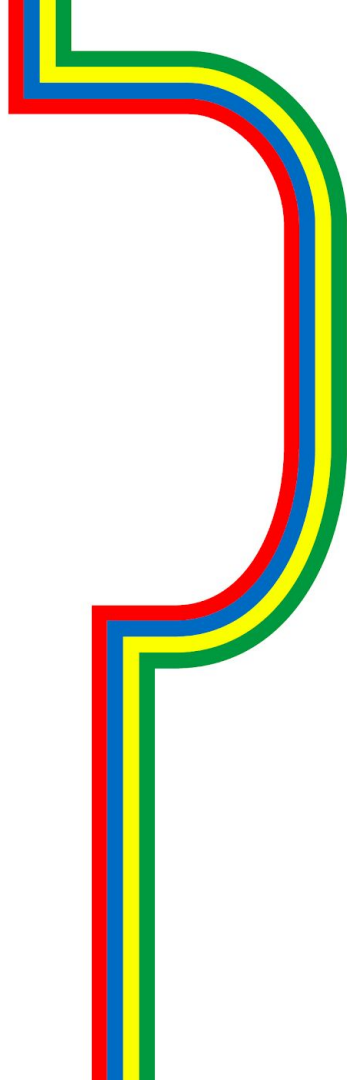George Sordoni

# Problem Statement

We have observed that people who work in or commute to DC for professional reasons have shown frustration with the inconveniences and costs of parking. This is intrusive and interrupts their daily routines. Since they are busy and work under tight deadlines and time constraints, they need a streamlined solution that allows them to continue their routines with minimal effort and time.

# Research

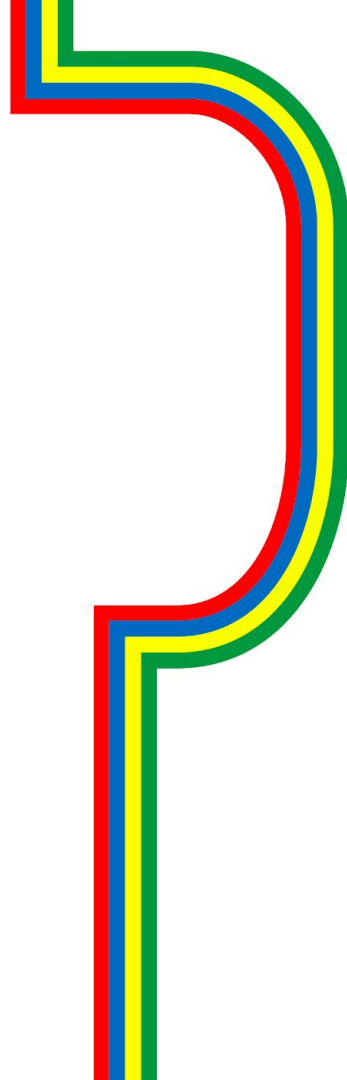| | iPhone | Android | Compare prices | Garages and lots | Street Parking | Ability to pre pay parking | Real time updates | Reservations | Designated Parking Spot | GPS | Discounts | Promised Savings | Timer-Alarm/Meter Expiration (avoid tickets) | Fee | Extra fees |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Best Parking | | | x | | | | | x | | | x | | | $5 | |
| Honk | x | | | | | | | | | | | | x | | |
| Parker | | | x | x | x | | | | | x | | | x | | |
| Parking Panda | x | | | | | | | | | | | | | | |
| Parking Mate | | | | | | | | | | | | | x | | $1.99 for no banner ads |
| ParkMe | x | | | | x | | | x | | x | | | x | | |
| Parkopedia Parking | x | | | | | | x | | | | | | | | |
| Parkmobile | | | | | | | | x | | | | | | | |
| Park Whiz | | | | | | x | | | | | | 60% | | | |
| Spot Hero | | | | | | | | | | | | | | included in parking price | |
| Waze (partnered with INRIX) | x | | | | | | | | | | | | | | |

# Research

| Business Account available to splt expenses | Permit Type Filter (Student, Disabled, Vehicle typ e (Electric, etc.) | Walking directions back to car/Find your car | Remembers locations | Discounted rate on its own dedicated spots with parking partners | Shows how far garage is from your destinations | Self Park | Info on parking restrictions | Ability to filter by Garage Amenites (Valet, creditc card, self park, covered, uncovered, handicap) | Safe area to park |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | x | x | x | | | | | | |
| | | | | x | | | | | |
| | | x | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | x | |
| | | | | | | | | | |
| x | | | | x | x | x | | x | |

# Research

| Monthly parking | Future Paking | Event Parking | University Parking | Airport Reservations | Input notes by user about parking restritions | NegativeReview Criticism | Posititve |
|---|---|---|---|---|---|---|---|
| | | | | | | | reasonable airport parking, big finger friendly buttons, minimal typing (Travel Channel) |
| | | | | | | | |
| | | | | | | Great customer support (Yelp) | they can't guarantee attendant holds spot (Yelp) Poor customer support (Yelp) Costs much more than finding your own spot (Yelp) not safe area (Yelp) |
| | | | | | notification for expired meter did not work; $2 fee for no banner ads (cars.com) | | Stress Free, loads quickly, take photo of car when inputting data, helps find car or prove meter is broken (cars.com) |
| | up to 2 weeks | | | | | | user interface easy to use )the droidguy.com) |
| | | | | | | | |
| | | x | x | x | | | |
| | | | | | | | |
| x | | | | | | | they can't guarantee attendant holds spot (Yelp) |

# Preliminary Research
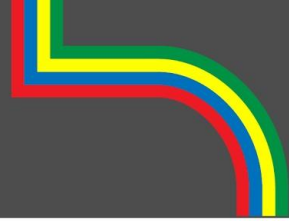
**Parking App Comparisons**

- Some parking apps are only for garage parking.
- The pay feature is very popular.
- Reservations features are limited to garage parking.
- Guaranteed reservation parking is not always coordinated with garage.
- A very desirable feature is a timer/expiration notification.
- A price comparison feature is popular.
- Users like the "find my car" feature of a parking app.
- Some parking apps have many categories of parking locations.

# UX Research - Interviews

- "I would like to change the time to be allowed more than 2 hours. We constantly had to move the car to different zones. Maybe 8 hours for a spot."

- "Yes, the signage is difficult. I read one sign, parked, then another sign behind me was different. I never saw it."

- "It could be better. I have to spend time to confirm hours."

- "The parking situation in every city is bad. I hate having to pay for parking. The signage is not good and enforcement is always ready to write a ticket."

- "Lot of parking tickets because we renewed through the app but they did not consider"

# Research Insights

**Interviews and Observations**

- Users want to avoid tickets.
- Users are confused by the parking signs
- Users hate to search for parking spots in DC
- Users have received tickets despite using a parking app.
- Users have experienced that notifications do not always work.
- Users have added payment with an app and still got a ticket.
- Users are happy with apps but still want more features

# Persona

## JAMES SANCHEZ

James is a lawyer beginning his career in Washington, D.C. He recently graduated from law school and had a late start to his career but is focused and determined to succeed. He lives in Fairfax, VA and commutes to work daily. He is married with two lovely children. Having just bought a house, he has many bills that he has to pay including mortgage, loans, utilities, etc. He wants to move up in his career so that he can be financially stable, pay off his loans, and save up enough money for his children's education. He enjoys staying active, listening to podcasts, and keeping up with news, sports, and politics during his free time.

> The parking situation in every city is bad. I hate having to pay for parking. The signage is not good and enforcement is always ready to write a ticket.

**AGE** — 38
**JOB TITLE** — Lawyer
**STATUS** — Married with two kids
**LOCATION** — Fairfax, VA

HARDWORKING  INTELLIGENT
CURIOUS  ACTIVE  INVOLVED

### FAVORITE BRANDS

### GOALS/NEEDS
- Become a partner with law firm
- Be financially stable within 5 years
- Save enough funds for kid's college
- Pay off mortgage/loans/bills

### PAIN POINTS/FRUSTRATIONS
- Not enough time to read signs and look for parking
- Confusion/frustration over signs
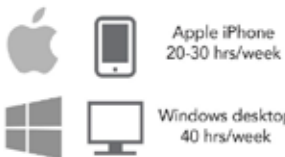- Worried about getting tickets

### TECHNOLOGY INVOLVEMENT
IT and Internet
Using Software
Using Mobile Apps
Using Social Networks

### DEVICES & PLATFORMS
Apple iPhone
20-30 hrs/week
Windows desktop
40 hrs/week

### INSIGHT
James, a new lawyer beginning his career in Washington D.C., needs to make a great impression on clients because he wants to build a name for himself and fulfill his career and financial goals.

### PERSONALITY
Introvert — Extrovert
Intuition — Sensing
Feeling — Thinking
Perceiving — Judging
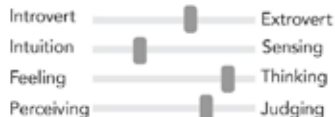
## Pains:
- No time to read signs and look for parking
- Confusion/frustration
- Worried about tickets
- Pay off mortgage, loans, bills; a lot of financial responsibility

## Gain:
- He gets to work on time
- He finds parking with little effort and time
- Understanding of signs and rules
- No worries about tickets
- No worries about car while at work

# Problem Statement & Value Proposition

- We have observed that people who work in or commute to DC for professional reasons have shown frustration with the inconveniences and costs of parking. This is intrusive and interrupts their daily routines. Since they are busy and work under tight deadlines and time constraints, they need a streamlined solution that allows them to continue their routines with minimal effort and time.

- For users commuting and traveling in the DMV area, our app will improve existing parking apps by providing information and innovative features that will improve users' parking experience. We will target the improvement of notifications and information delivery to increase the efficiency of locating parking spots and decrease user pains and frustrations.

# UX Scenario
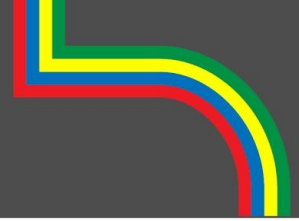
James Sanchez, a lawyer working in Washington D.C., is preparing for a big case that will make an impact on his future career. He is running a bit late because of traffic and finds himself struggling and switching locations because of unreliable signs and information. He rushes into court late to everybody's disappointment. After a long day, he goes back to his car and is greeted with a ticket and a big fine. Frustrated and angry, he goes home and decides to look for solutions to the parking situation in DC.

# Storyboard

**Scene:** 1



James prepares for the biggest case of his career.

**Scene:** 2



Driving to the court house there is really bad traffic and he is running late.
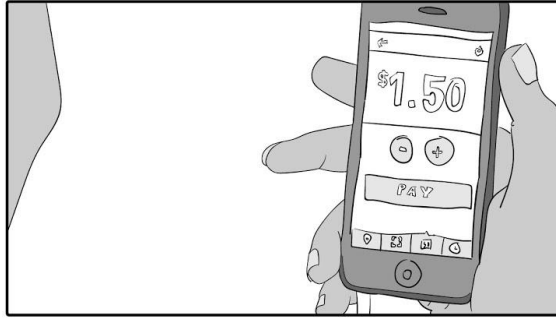
**Scene:**
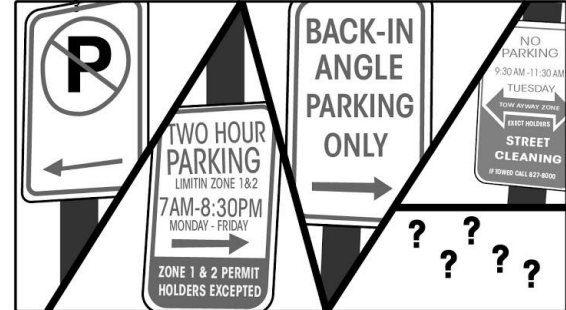


James finds a parking spot but is confused with all the signs that iare on the post near by. Not confident enough on the spot he moves.

## Scene: 4



James finds another spot a block away from the first spots looks at the time and just gets the zone number and leaves the car

## Scene: 5



As he is walking to court he opens up the Park Mobile app and pays for his spot.
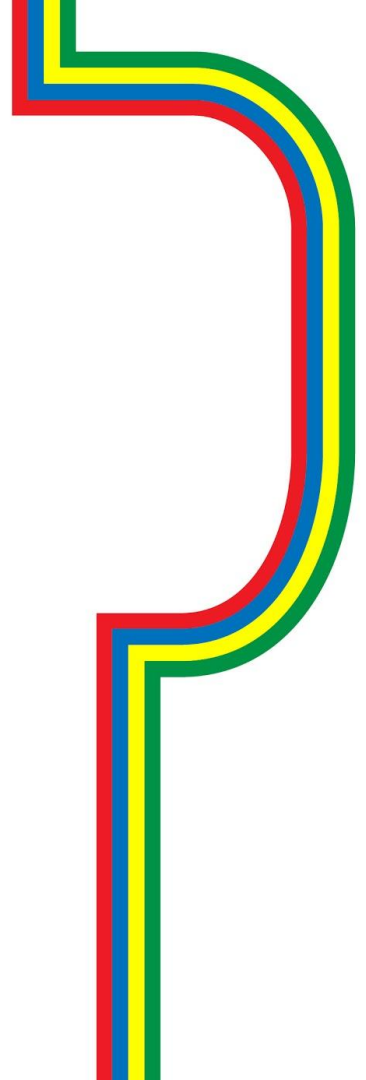
## Scene: 6



When he finally makes it in to court he is welcomed by angry faces. The judge feels very disrespected and fines him.

## Scene: 7



The judge calls it a day. James walks back to his class and finds a ticket waiting for him on his car.
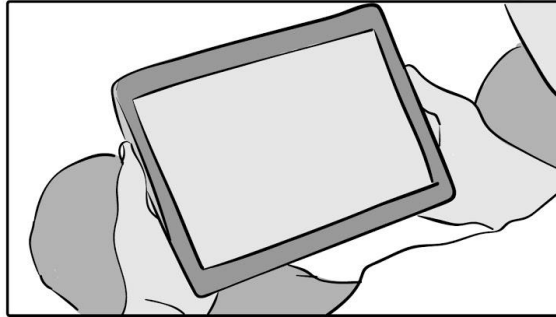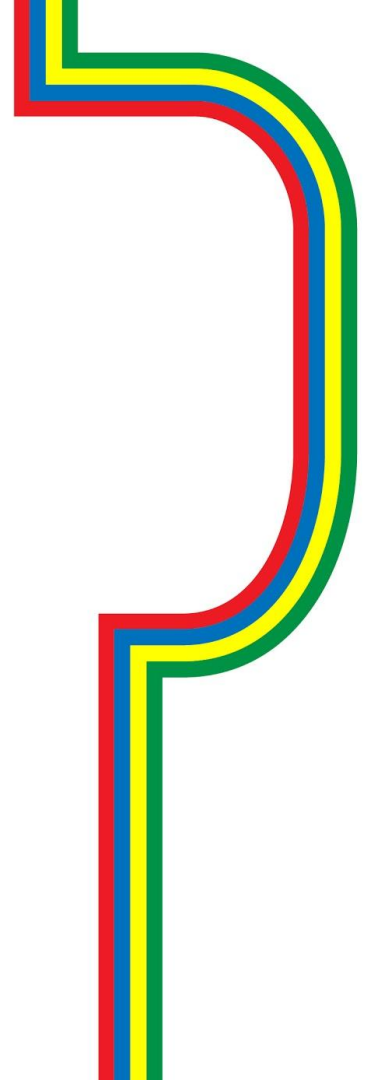
**Scene:** 8



Frustrated he just sits in the car and think about what he could have done to make his day better.
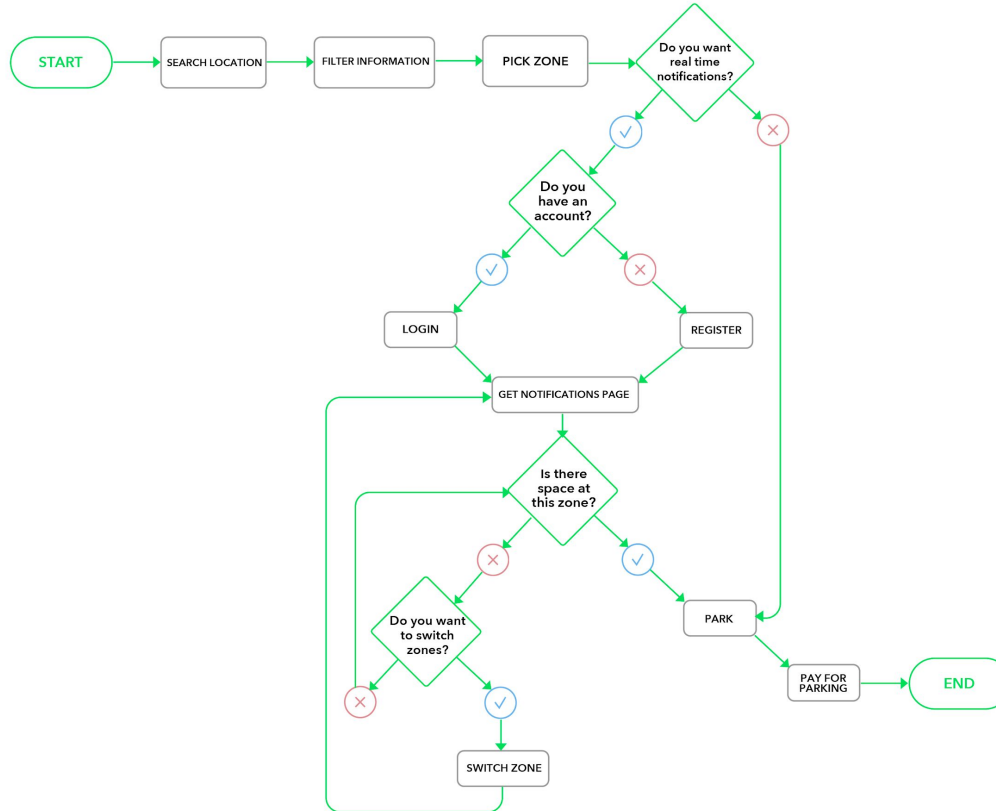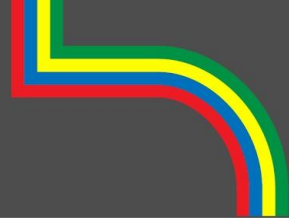
**Scene:** 9



After having dinner with his family. He sit down and looks up more information about parking signs to be better informed.
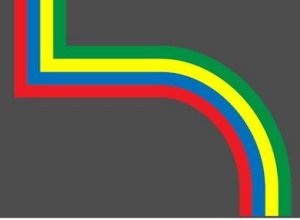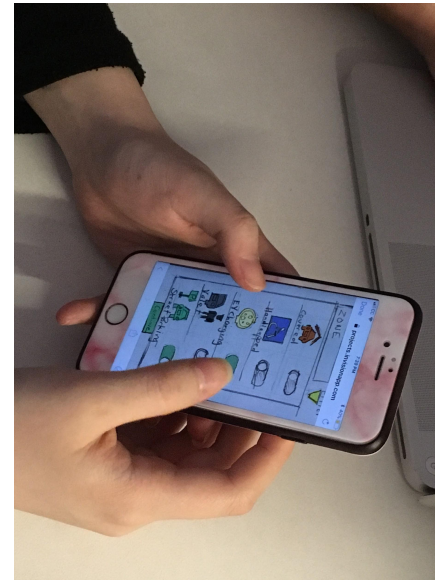
# Decision Flow Diagram

# Paper Prototyping/Wireframes

# Invision and Testing

| Iteration 1 | | | | |
|---|---|---|---|---|
| User1 | User2 | User 3 | User 4 | User 5 |
| color code various types of zones | show path of scenario more clearly | put button for user account on home screen | put some handicapped spots on map | |
| color code icons | make every button loop back to a screen | put filter button on other screens | color code | |
| | | show a screen confirming that you | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Iteration 2 | | | | |
|---|---|---|---|---|
| User1 | User2 | User 3 | User 4 | User 5 |
| does my car fit in space (compact car, etc) | show hours available for parking in spot | add something for disabled so they don't need to use buttons on phone | language preference | |
| show if a space is covered, small image can pop up showing | photo of space that pops up | walking directions back to car | hours available | |
| have option for garages | notification | reservations | needs notification of time remaining on meter | |
| overnight parking | show covered parking spots | garage parking, reservation | ability to find car | |
| rates | expiration notification | | photo of where you've parked | |
| | | | | |
| | | | | |

| Iteration 3 | | | | |
|---|---|---|---|---|
| User1 | User2 | User 3 | User 4 | User 5 |
| add back button | information overlay screen | add back button | countdown of time remaining | easier to use than Parking Panda |
| payment options | back button | clearer than the one I use | notifications look like buttons | I would like to use it |
| clarify menu items | payment options | | context explanation | |
| instructions to use | question mark | | back button | |
| | | | remove clock | |
| | | | explanation in menu | |
| | | | search button not clear | |



Invision Prototype:

https://invis.io/H4GSF40UDNC#/290474802_Home

# Conclusion and Future Developments

With informing the drivers we helped them save time from waiting to get to a parking spot and not find anything but notefing them before, they can plan ahead.

Ideas for future Development

- Accessible areas for people with disabilities.
- Reservation for parking on the street. (with some time restrictions)
- Work with garages to get real time data on spots and reservations.
- Guidance/directions back to car.
- Show spaces designated for compact cars, EV vehicles, covered parking
- Features in app for people with disabilities
- Language preferences

# Questions?