



# SmartPark

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# Our Project

## The Challenge

Our project aims to simplify the parking experience on campus.

## The Approach

We're taking a user-centered design approach, focusing on understanding the needs and perspectives of the people we're trying to serve.

## The Team

Our diverse team brings a wealth of expertise and unique perspectives to the table. We're excited to collaborate and bring our ideas to life.



# The Ideation Process

## Brainstorming

We started by generating a wide range of ideas, encouraging creativity and thinking outside the box.

## Lotus Blossom

Through an iterative process, we refined and iterated on our ideas, sharpening our focus and developing more robust solutions.

# Market Research Findings



ParkMobile



Parkingapp.com



SpotHero

# ParkMobile



1

## Unique Properties

- Easy way to pay for parking
- Selective Parking (location or needs)

2

## Advantages

- Supported by all platforms
- Only Parking Company in Ames

3

## Disadvantages

- Does not help you find a spot
- Does not keep track of open spaces

# Parkingapp.com



1

## Unique Properties

- Not enough information

2

## Advantages

- Compatible with 2 apps
  - Parking.com
  - Parking Passport

3

## Disadvantages

- Small community
- Little information on this company

# SpotHero



1

## Unique Properties

- Real-time parking availability and pricing data for spots across multiple cities.

2

## Advantages

- Convenient mobile app that allows for quick reservations and payments.

3

## Disadvantages

- Service fees may apply, increasing the overall cost of parking.



# Promising Ideas



## Hardware

Create multiple Arduino circuits connected to a main Wi-Fi board via Bluetooth to upload all sensor data to our server



## Software

Develop a user-friendly mobile app with intuitive features and a sleek interface



## Server

Build a robust server infrastructure with high security measures to handle a large volume of data



# Next Steps and Conclusion

1

## Prototype

We'll begin building prototypes of our hardware based on our designs, and our application.

2

## Server

We will create our server and test the compatibility of the front end and the back end of our application.

3

## Communication

We'll culminate all three portions (Hardware, App, Server) and test the communication of the overall system.

We're excited to continue our journey and bring our innovative solutions to life. Stay tuned for more updates!