

Proposal for GeauxPark

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Executive Summary

It is no secret that students who commute daily to LSU for class will at some point come across the struggle of finding a parking spot. Arriving on time to a class is the number one priority of every student. The time wasted hunting for a spot that doesn't earn you a ticket or a long walk home adds even more stress to the average commuting student. As of Fall 2020, LSU Housing statistics recorded only 7,944 students were living on campus either in dormitories, greek housing, or graduate/family housing. This value is minuscule in comparison to the total number of enrolled students in the same semester being 34,290! This means that a maximum of 26,346 students could commute to LSU daily for their classes. Not only is that an extreme amount of traffic moving throughout campus, but not all parking spots are open to a student commuter. Spots are reserved for faculty, facility services, paid parking (excluded from the already expensive parking passes), and handicap accessible.

GeauxPark is a user-friendly tool that can help students find parking with ease. Over time, students have become more reliant on technology to assist in their daily routines. Not only does this improve the ability to locate a spot, but it also has the potential of reducing the morning congestion of cars converging onto an already full parking lot. This allows more free-flowing traffic for not just students, but also faculty or facilities management that park in the same parking lots.

Currently, there are multiple companies utilizing application-based programs for parking management such as OPS-COM, Parking Boss, and Air Garage. However, these solutions are standalone software suites that do not provide the possibility of integration into LSU's mobile application. Another issue is that the platforms are built around the need of enforcing parking privileges by the owner and not providing any benefit to the commuter. Finally, the overall cost to purchase and maintain one of the current competitors requires a quote from a sales representative that is based on the size and scale of the business.

GeauxPark aims to provide a user-friendly interface that not only provides real-time parking data to daily commuters but can also provide LSU with valuable statistical data. In order to record real time data, GeauxPark's application will require the installation of License Plate Recognition (LPR) Camera Systems. While this may seem like a downside to using our product, this system would also be able to replace the restricted access gates that allow access to restricted parking lots and within the university grounds. These access gates currently operate off of a RFID wand that is issued to the authorized commuter. Not only would this streamline commuter parking but it would also reduce the total cost to manage restricted lots/access. On top of saving money the information gathered by our systems could allow for the university to better understand the flow of traffic, geographically map focal points of high-density parking by the time of day, and also consider the possibility of expanding the parking that is currently available.

The GeauxPark project will be developed using open-source web resources with the intent of reducing the costs of development and ease of implementation into LSU's mobile application.

Gap in the Market

In the current market the providers of parking solutions do not offer a specific model to accurately track and display commuter parking. The solutions that are available are focused more towards managing a pay-to-park business where the user would utilize their services to pay or reserve the parking spot they choose. This current model does not put into consideration the already designed permit system LSU utilizes and how to implement this database to portray parking data.

Companies that already have designed platforms for managing parking spaces could broaden their available utilities by buying our proprietary software, GeauxPark. This provides a greater opportunity for those businesses to scale up whom their software can benefit such as educational establishments or large-scale businesses.

Meeting the Market Needs

GeauxPark aims to fill a growing need by providing a cheap, open-source infrastructure that utilizes data already collected by the universities or large organizations. GeauxPark intends to provide an interactive map of the university/business and its available parking spaces with real time updates of how many total spots are available at any given time. This will allow commuters, faculty, and even the university/business better plan daily activities on their grounds.

Implementation

Management

GeauxPark will be managed by its contributors: Austin, Fikir, Alyse, and Cole

Development

GeauxPark will be developed using the following technologies:

- Front End(User Interface)
 - React- A JavaScript library for building user interfaces.
 - Relay- A JavaScript framework for building data-driven React applications.
- Back End(Web Server/Data Base)
 - Node.js - A JavaScript runtime environment
 - Express.js - Fast, unopinionated, minimalist web framework for Node.js
 - MongoDB – Non-SQL database
 - Mongoose – an ODM that provides a straightforward and schema-based solution to model your application data on top of MongoDB’s native drivers.

Marketing and Distribution

GeauxPark plans to market their product by offering a 30-day free trial to all universities and businesses interested. Distribution of our product will be via our main website portal download

page. In order to access the download page organizations will be required to register an account with GeauxPark.

Monetization

GeauxPark's financial model will be based around a subscription basis where customers will be required to renew every month or on an annual basis.

The Problem and Our Solution

The current issue that is found with most solutions provided on the market is that they do not serve any benefit to the people that the software was designed to monitor and manage. Some of the competitors such as ParkingBoss does allow commuters/visitors to reserve available parking spaces for a price. However, none of the platforms are able to tailor for universities or large businesses that may already have parking permits in place.

GeauxPark is a solution that intends to provide a flexible platform, that is easy to use, and interactive for both the customer and the commuters they manage.

Industry Need for Our Technology

GeauxPark will serve as an interactive, real-time application that serves to assist both the customer and its commuters. GeauxPark will be able to replace the need to have multiple different applications and physical parking enforcement to manage flow of traffic. From finding your next parking spot to notifying parking enforcement of someone illegally parking, GeauxPark provides an all-in-one solution.

The solution GeauxPark aims to provide is a user-friendly, real-time, expandable application to streamline the management of university and organization traffic flow.

Market Analysis / Primary Market / Secondary Market

The main competition for GeauxPark would be Ops-Com, Parking Boss, and AirGarage. Ops-Com is widely used in public parking areas and offers cloud-based parking and a security management solution that also utilizes the LPR camera systems. Parking Boss is a cloud-based parking management solution that is targeted for residential use using QR codes. AirGarage is a parking operating system that supplies public parking facilities a way to digitally charge for their spaces. Our main goal is to not only convince, but show how GeauxPark would be a better fit versus the current system that is implemented already.

The primary market will focus on universities and organizations with a larger amount of parking spaces such as large commercial businesses. The secondary market will focus on apartment parking, condominium parking, shopping malls, and pay-to-park parking lots.

Marketing Strategies

Overview

GeauxPark aims to fill a growing need by providing a cheap, open-source infrastructure that utilizes data already collected by the universities or businesses. GeauxPark's financial model will be used around a subscription basis where customers will be required to renew every month. GeauxPark plans to market their product by offering a 30-day free trial to all universities and businesses interested. Distribution of our product will be via our main website portal download page. In order to access the download page, organizations will be required to register an account with GeauxPark.

Primary Customer Analysis and Entry Strategy

The strategy that the GeauxPark team is taking to enter the market is to provide a very good product with minimal charges in order to make the universities and businesses see that they need GeauxPark. After the 30-day free trial, the university or business will begin to pay the monthly or annual subscription fees. As more clients begin to use GeauxPark more potential businesses will want to try our product through its free trial

Core Competency

The core competency of GeauxPark is the combination of the convenience and safety market at a low cost. GeauxPark will also be easier to use than its competitors and be a high-performance application. GeauxPark will constantly have new features being added which may allow us to enter and/or benefit other markets as well. Some of these features include working with the local police department to allow for faster solved crimes. We will also be open to client requests for new features. We would like to make GeauxPark widely used in many different businesses with a wide range of clientele.

Sales Strategy

Pricing

When a client first starts using GeauxPark, they will get a 30-day free trial. After this time, the client will either be charged a monthly or annual subscription fee with the annual subscription slightly discounted relative to the monthly subscription. Our prices will be very competitive with the current market, while also providing a better service to the customer.

Positioning

We plan on engineering GeauxPark to be as useful and convenient for any and all clients that wish to use GeauxPark.

Promotion

GeauxPark will use various promotion strategies such as internet marketing and advertising, direct contact with university/organization representatives, offline marketing, and other marketing forms.

Place

GeauxPark is currently a successful run from home startup that is planning on transitioning into a more corporate role in the near future.

Competition

Ops-Com

Automated parking security system that uses LPR cameras to monitor parking activity. This includes permit and activity management for admins to oversee their space.

Parking Boss

Cloud based parking management solution targeted for residential use. Users manually scan QR codes to update the parking availability in that area.

AirGarage

Parking operating system that supplies public parking facilities a way to digitally monetize their space. Users can remotely check availability or reserve space through AirGarage.

Development Strategy

GeauxPark requires a mix of hardware (cameras, sensors, and wiring) and software (UI, live updating, and database access) in order to accurately record the state of parking on campus/business. These all need to work in conjunction so that users are supplied an accurate picture of available parking spaces in real time.

First Stage: Developing software in parallel with the hardware and databases needed to accurately display the parking data for LSU. Work with client to design hardware layout and physical implementation.

Second Stage: Testing our prototype with sample data and similar infrastructures that we ultimately plan on implementing this with.

Third Stage: Implementing the prototype into the specified system and test with the designed hardware setup

Final Stage: Deploy on LSU's network. Data and reports will be used to fix any bugs/features that LSU has with the application.

Barriers

- Technology and software creation
- Ease of transition for clients
- High cost of marketing the product
- Potential competition with market leaders
- Software and 3rd party hardware integration
- Integration with customer databases

Critical risks

Our major risk in creating this software is that after we launch it, our competition could steal our idea and incorporate it into their already established system.

We plan on marketing GeauxPark to universities and businesses that have large parking lots. It is likely that most of these organizations already use some type of a well-established parking system. They might not want to get a subscription with us and instead ask their system providers to add a feature that does what we offer to avoid moving to a completely different system as they have a large population of users.

We give companies the opportunity to buy our product and incorporate it into the systems they are already using so we can minimize the chance of universities/companies stealing our idea for convenience's sake.

Interviews

We interviewed 5 students (2 by phone, 2 by email, and one by text) with the following questions:

Do you like parking on campus?

- Yes (1) (Interview 3 – In Person)
- No (4)

What do you like/dislike about parking on campus?

- I live far away so it's the best way for me to get to my classes (Interview 1 - phone)
- Traffic (Interview 2 - phone)
- Takes forever to find a spot (Interview 3 - In Person)
- The walk from your car to class is always long and on hot or rainy days I often skip because of it. (Interview 4 – In Person)
- The lot is usually full and I can never fit my truck into a spot (Interview 5 – In Person)

What would you change about the parking situation?

- Make more space for more lots (Interview 1 - phone)
- Designated parking for specific cars (Interview 2 – phone)
- Open the lots on campus to students during the day (Interview 3 – In Person)
- Make it free! (Interview 4 – In Person)
- Build a parking garage next to PFT and the BEC (Interview 5 – In Person)

How useful do you find apps such as Waze?

- When I'm traveling out of town its essential for me finding my destination and how bad traffic is. (Interview 1 – phone)
- I use it every day on my way to work and class! (Interview 2 - phone)
- When it comes to carpooling for gameday, we always use apps like Waze to figure out where we are going to park (Interview 3 – In Person)

- I only use it probably twice a month since I know my way around (Interview 4 – In Person)
- Waze sometimes isn't the most accurate and can actually direct you on a longer path (Interview 5 – In Person)

Would you use an app to check on parking availability before coming to campus?

- Yes (5)

What benefits/drawbacks do you see with a parking application?

- I would be more prepared for my classes if I knew more about how long I would need to park (Interview 1 - phone)
- Easier to find parking (Interview 2 - phone)
- I could get to class way easier (Interview 3 – In Person)
- I would love to be able to see what the traffic is like around campus before I go (Interview 4 – In Person)
- I wouldn't be so stressed about finding a spot before class (Interview 5 – In Person)

Would you feel safer on campus knowing cameras are monitoring parking lot activity?

- If I'm not being monitored outside of campus, yes (Interview 2 - phone) & (Interview 5 – In Person)
- Yes (Interview 1 - phone), (Interview 3 – In Person), (Interview 4 – In Person)