

# Food Trucks Puerto Rico App

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**Abstract** - *In Puerto Rico there are many food trucks with food and dishes that are not seen in any restaurant and not many people know them. Over the years, more food trucks have been added to Puerto Rican food with creative dishes and foods. I started the task of looking for an application where I could see different food trucks in PR but none exist. I think it would be a good idea to make an app with a PR map and show the food trucks on the map. The community of food trucks in Puerto Rico is getting bigger. Many pages on Facebook publish food truck dishes but do not put many details of the place. I started the task of creating an application to be able to market those establishments that do not have much promotion like a traditional restaurant but they are good as them. With a mobile application, everyone would be more accessible to visit and know these new establishments.*

## Introduction to Food Trucks

In Puerto Rico, the itinerant food businesses have existed since "Las Fiestas Patronales" in each of the towns on the island [1]. With a stagnant economy and very few alternatives to get paid jobs, new entrepreneurs are directing their efforts to establish this kind of bu-

siness on wheels. The first choice of a person who wants to set up a food business is to do it through a "food truck" before venturing out to establish a traditional restaurant business.

Usually the steps you are following are hasty; Buy the unit, take out the permits, make an initial purchase of ingredients and start operating. But the success of this type of business depends on a strategic planning that involves an operational plan, a business plan, the design and development of the menu, the design and development of a unit that complies with all the regulations stipulated by the Code of Conduct. In Puerto Rico the business of Food trucks is increasing and people like it more. Food trucks for owners and customers have many advantages.

## Advantages for Owners

- Do not require many operational permits as a traditional local business.
- They can be located in places more accessible to people, such as on the roadside where it is more common to see a food truck.
- As a bus, they do not have to pay rent.
- You do not have to spend in a large kitchen.
- Do not have to spend on facilities for the clients.
- They do not care about the bathrooms.
- Few employees.
- Do not have to open every day, only the days of most demand.

- They do not have to be governed by all the rules that require the traditional locals.
- They can open until late in the night.

## Advantages for Customers

- Cheap food.
- Open until late in the night.
- Accessibility.
- Variety of creative foods.

Overall, the success of food trucks focuses on location, flexibility in scheduling and creativity. Food trucks stand out for making inventions with food, dishes you could never imagine eating, you'll find them there. Traditional restaurants have a problem of creativity since they are always based on the same dishes as for example: mofongo, churrasco, breasts, fish, and shrimp, among others. Food trucks in creativity are so much better. Each food truck has a dish which makes you want to go try it out. If the food has no rules of how to mix them, why not invent new dishes? One of the most interesting dishes among some food trucks is the mofongo burger.



Figure 1 - Mofongo Burger

This exquisite dish can be eaten in different food trucks on the island.

## MOBILE APPS

The way in which society connects to the network has changed radically in recent years [2]. This is partly due to the large market share of the so called smartphones, which already account for more than half of the country's mobile phone fleet. Similarly, we see how the internet connections through these devices have improved their quality, while their prices have been drastically reduced.

All this has caused that the mobile devices have become one of the main means of connection to the network, being already a true alternative to the traditional forms. For a long time, for any company, it is imperative to have a presence on the network, however, today this is not enough, since these new rules of game, make it necessary that the contents are also accessible through any mobile device. In this sense, it is not only essential to have a web adapted for viewing on mobile phones, but to have a personalized application will be a differentiating element, as well as an interesting advertising tool.

However, despite the great potential that we can obtain from a mobile application, its development and launch will be a long process and not without difficulties. It is not enough to have an application, it must be of quality, intuitive and practical for its users. On the other hand, we see that there are several platforms, so to ensure maximum diffusion, it will be necessary to develop an application for each one of them.

There are hundreds of thousands of applications, and many of them will be similar to ours, so it will be essential to have adequate

promotional tools, to get as many potential customers as possible.

Undoubtedly, mobile apps are today very important tools of communication, sales and customer loyalty that many companies cannot ignore in their corporate strategies and actions that seek both tangible and intangible results; Both in the short, medium and long term.

## IMPACT OF MOBILE APPS IN BUSINESS

Mobile applications have boosted the trading of smartphones and made sense of their use. It is difficult to imagine the great success of these devices among users without the appeal of the apps, who have known how to break the market and find more niches than you might imagine at first.

For a long time, humans dreamed of devices that allowed us to enhance our way of relating to the world. When the first mobile phones arrived the simple fact of having the ability to call from anywhere we loved. Little by little technology has evolved and smartphones and mobile Internet connections have allowed applications to be developed that in turn put the capabilities of the devices into operation.

## IMPORTANCE OF GPS

Since all cell phones have the option to connect to the satellite and see where they are if they were lost, the GPS can be used to get to a place you had never been. In the case of food trucks, there is not much information online to know the exact address of the place, so GPS is very useful to find the place. Many people can think of better not visit the establishment if they do not know exactly where it

is but with GPS you can get from wherever you want and it will take you without problems. In case you missed a street or exit, you are going to have new directions by other ways so you can arrive.

## TYPES OF APPLICATIONS

To talk about what are the different types of mobile applications and their characteristics, it is necessary to make clear something, which is a mobile application [3]. Then it can be said that, a mobile application, it is a computer application developed to be executed through a smart mobile device.

Within all applications, not all are of the same type. The types of mobile applications that are known are, native, web and hybrid.

Native Applications: The native applications are those developed under a specific development language and environment, which allows its operation to be very fluid and stable for the operating system that was created. But it is also important to remember, that everything in this life has its advantages and disadvantages, and that native applications are not the exception. The advantages and disadvantages of these are:

### Advantages

- Use of both system and hardware resources.
- Allow to be published in stores for distribution.
- For the most part, they do not need to be connected to the Internet for their operation.

### Disadvantages

- They can only be used by a device that has the system for which it was developed.
- Requires a cost to distribute in a store, and depending on the

system, for the use of the development environment.

- Need approval to be posted on the platform.

**Web Applications:** They are those developed using languages for web development such as html, css, javascript and a framework for the development of web applications, such as jquery mobile, Sencha, Kendo UI, among others. It could be said that this type of applications is widely used to provide accessibility to information from any device, regardless of the operating system, since you only need a browser to access it. The advantages and disadvantages of these are:

#### Advantages

- Can be used from any device regardless of operating system.
- It may require a cost for its development, but this may be minimal compared to the native ones.
- They do not require any approval for publication.

#### Disadvantages

- Cannot be published on platforms for distribution.
- Do not use system or device resources optimally.

**Hybrid Applications:** Finally, hybrid applications, as their name implies, have a little of each type of applications already named. This type of application is developed using web development languages and a dedicated framework for the creation of hybrid applications, such as phone gap, titanium app accelerator, steroids, among others. The easiness of this type of development is that there is no specific environment which must be used for its development and most wave tools are free to use, and can also be integrated with native

application tools. The advantages and disadvantages of this type of application development are:

#### Advantages

- Use of device and operating system resources.
- The cost of development may be less than that of a native.
- They are multiplatform.
- It allows distribution through the stores of its respective platform.

#### Disadvantage

- The documentation may be a little scattered and disorderly.

#### SWIFT VS. OBJECTIVE C

Objective-C had been the main language to develop for Apple products since the acquisition of NeXT in 1996 [4]. However, WWDD in 2014 was announced by Swift. A new language with important improvements and new features. Currently all Apple products are made with Objective-C. But thanks to Xcode, the IDE to create Apple applications, you do not have to worry about compatibility; since it allows to work with Objective-C and Swift to the time. If you already know how to program in Objective-C, you will find it very easy to learn how to program in Swift. And if you're new to iOS development, learning the latter will be easy for you. Swift focuses on a protocol-oriented programming paradigm. This means that it is a language that prefers the use of protocols, better known as interfaces, rather than classes. In this way we achieve a more flexible and modular code; As well as solving problems such as the need to use a "superclass". Something very interesting about Swift is the handling of dynamic libraries. Previously, static libraries were only updated in new versions. But now the libra-

ries will be constantly improving along with the language. Apple is investing in constantly improving Swift's performance; and your applications will benefit from these improvements. Swift is much easier to read. In general, the syntax for working with methods is now much simpler. For example, if in Objective-C you need: `[myTableView addSubview: mySubview atIndex: 2];` [// Code] With Swift you would write: `[myTableView addSubview: mySubview, atIndex: 2]` [// code] [5]. Also, if you do not need to pass arguments, you can leave the parentheses empty. For example: `myTableView.layoutIfNeeded()` [// code] With Swift we can create much more reliable code. In Objective-C it is possible to create pointers without content, that is to say in null state, this may seem comfortable when creating the code, but it can cause errors in our application that can be difficult to detect. In Swift all objects will always have a value. If we want to leave the variable empty, it is assigned the value null; because if left blank, the compiler will mark us an error and will point us the object that is empty. This will surely save us a headache in the future. Swift is Apple's future and eventually all of its products will be made using Swift. Objective-C will someday be just a memory.

#### APP PROCESS

This application called Food Trucks PR, was made in the Swift language. This language is exclusively for use on Apple computers and is exclusively for the app store. Nobody can make an application in Swift that does not have a Mac since the program that is used to create the applications is called Xcode and only works in operating system OSX. The

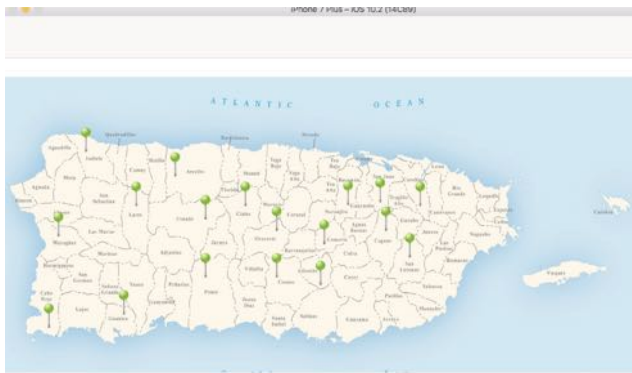


Figure 2 - Map View



Figure 3 - San Lorenzo's Pin View



Figure 4 - GPS Button View, Facebook

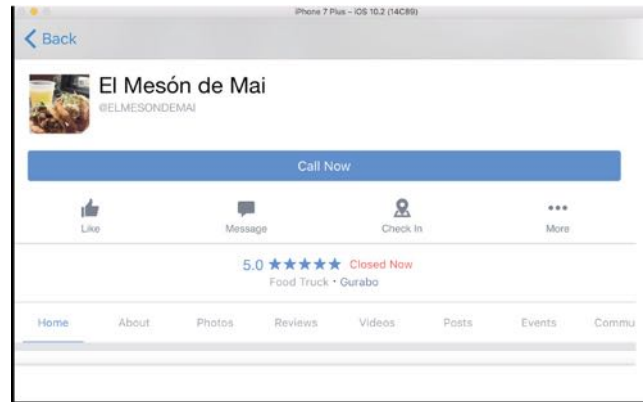


Figure 5 - Facebook View 2

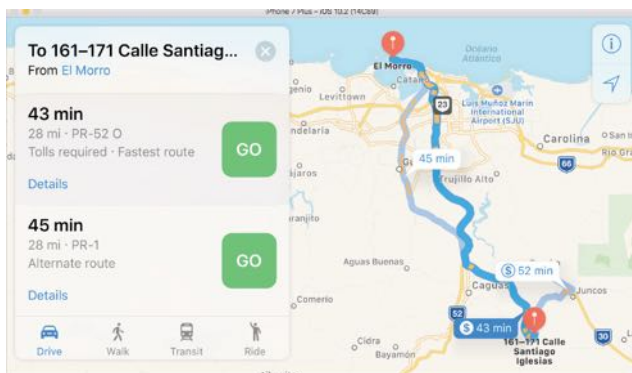


Figure 6 - GPS View 1

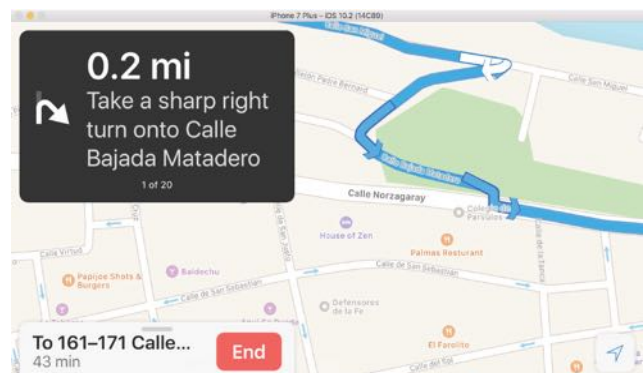


Figure 7- GPS View 1

Xcode has a simulator to compile the application and see exactly how it would look on the phone [6]. This platform has all the features to work on all the different cellphones and Apple iPad. When designing, you have to specify in which cellphone will concentrate, but you always use a feature to fit the screen of the user's cellphone, so it is compatible for anyone. When programming applications there are 2 parts to do, programming and design [7]. The design

part would be everything the user sees as background, photos, view details. Programming would be what is behind each button and every function of the application.

## RESULTS

The application has a map of PR with a few pins that would be indicative that in that town there is a food truck registered in the application. When you choose the pin you want, it shows you basic business information such as the

schedule, town, description and a button that takes you to the Facebook of the business and eventually be able to enter the GPS to get to the place.

## FUTURE WORK

At this point, the application is not published in app store because to officially publish it, you have to subscribe as a developer on Apple, pay \$ 99 and the application goes to an evaluation committee to see if they approve it in

the app store. Besides publishing it, I have other ideas to improve the application in the future:

- Develop the application for android.
- Allow users to give ratings and leave comments about the business and to see the ratings and comments of other people.

- Put more establishments.
- Put photos of the place on the main page.
- Allow the GPS to locate you and show you the food trucks near you.

### CONCLUSION

Thanks to this project I was able to learn how to program in

Swift and to work in a business environment. Investigating about PR food trucks made me reflect on the sacrifice these owners make and the advantages of having these establishments available to everyone. Swift is an excellent tool to program applications, since it is friendly to the programmer and easy to understand.

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*Sin título*, Roberto Silva Ortíz. Óleo sobre tela.