# Bootcamp - iOS Mobile Developer

The ITJuana Talent Team is organizing a Bootcamp to accelerate participants into the journey of iOS mobile native software development.

This event is intended for professionals and students in her/his last semester of careers like Computers Engineering, Software Engineering, or related with some experience in mobile software development wanting to build their career as a mobile developer.

**OKRs**

* Have at least 50 participants.
  + 60-70% Junior
  + 30-40 Mid-level
* Have a 75% conversion rate from participants to selected candidates for open positions.
* Have a 50% conversion rate from participants to offers accepted.

**Requirements**

* A Mac Computer - mac OS X Catalina or above.
* Proficient in English. Able to understand and communicate fluidly in English.
* Familiar with macOS and iOS environments.
* Proficient in Object-Oriented Programming.
* Experience developing mobile applications or you can take one of the training options available in the section “Prerequisites for not experienced iOS developers”
* Experience with Source Code/Version control.
* NTH: Familiar with Agile software development environment.

Mid-Level developer

All requirements in the Junior developer section, plus:

* 2 years of experience working on iOS native development
* Proficient on the MVC design pattern.
* Proficient on Unit Testing.
* Proficient with Source Code/Version control.
* Capable of creating Complex and Reusable UIs.
* Nice to have: Experience with Xcode Instruments.
* Nice to have: experience deploying apps to the apple store.
* Nice to have: familiar with SwiftUI.
* Nice to have: familiar with Reactive programming.

Software

* Xcode 12.0 - 12.5.

Accounts

* A free Apple Developer Account
* A free Github Account

**Prerequisites for not experienced iOS developer**

If the participant don’t have experience developing iOS application, the requisite of experience can be covered doing one of the following trainings

1. [iOS Course Lectures - Spring 2019](https://www.youtube.com/watch?v=iPZaNB88Eww&list=PLjf6nsEcF5KO2Eh6HmKztVRsBVDJ3x5qc)
2. The first 13 sections on the training [iOS & Swift](https://www.udemy.com/course/ios-13-app-development-bootcamp/) on Udemy. From the section “Getting started with iOS Development and Swift 5” to the section “Networking, JSON Parsing, APIs, and Core Location”

Important Note: the topics about Core Location in section #13 are not required.

**Recommended Materials (as reference prior the bootcamp)**

* Book: Develop in Swift Fundamentals
* Book: Intro to App development with Swift
* Website: [raywenderlich.com](https://www.raywenderlich.com/ios/books)

**Note**: the books described below are found inside the “Books” App in MacOS.

**Prior the event**

Pre-screening questions

The person must respond to a series of questions defined to identify if meets the requirements and to what track he is a potential candidate for.

Interview

Quick interviews (10-15 min) with selected people are conducted to review the requirements to participate in the Bootcamp.

**The Event**

COVID-19 Protocol:

For making sure everybody is safe, the protocol below will be in place for all the onsite attendants:

* Everybody must wear a face mask during the Bootcamp.
* Everybody must use hand sanitizer gel before entering the facility.
* Everybody must scan their body temperature. No access is allowed if the reading is outside the accepted parameter.

The bootcamp is an immersive event for learning the basics skills to become an iOS native mobile developer. After the completion of the bootcamp the attendee will be able to create applications for mobile environments running the Apple operating system - iOS.

The event is divided into four days full of activities, around 30% of the time in technical knowledge and 70% of the time in hands-on labs building a real native mobile app. Each day is 7 hours long with one-hour lunch time and 15 min breaks every two hours to recharge.

A new learning experience, you learn - through instructor lead topics & you build - at hands-on labs.

The event has two learning tracks with different agendas, one for juniors and one for mid-level developers.

**Agenda** (Length: 19 hrs approx. ~3 days)

Day 1, Saturday July 24th (5 hours available)

* [15-30 min] Introduction (**Julio Barrera**)
* [1.5 hr] High Level overview of technology stack and tools (**Julio Barrera**)
  + Tools (Xcode)
    - Create a new Xcode project
    - Navigator
      * Project Navigator
      * Source Control Navigator
      * Symbol Navigator
      * Find Navigator
      * Issue Navigator
      * Test Navigator
      * Debug Navigator
      * Breakpoint Navigator
      * Report Navigator
    - ToolBar
    - Inspector
    - Debug Area
    - Project / Targets
    - Editor
  + Programming Languages (**Julio Barrera**)
    - Swift Tour (https://docs.swift.org/swift-book/GuidedTour/GuidedTour.html)
  + UI Frameworks (**Julio Barrera**)
    - UIKit Tour
    - SwiftUI Tour
* [4 hr] Fundamentals in Swift programming. (**Martin**)
  + Elements of the Standard Library
  + Swift’s approach to safety
  + Functional Patterns
  + Extensions
* [1 hr] Memory management (**Martin**)

Day 2, Sunday July 25th (4 hours available)

* [4 hr] Building an App with UIKit (**Daniel**)
  + Storyboards
  + XIBs
  + Code-written UI
  + Segues

Day 3, Saturday July 31st (8 hours available)

* [2 Hr] Design/Architectural Patterns in mobile app development.
  + Design Patterns (**Martin**)
    - Singleton
    - Observer
    - Delegate
* [30 min] Using CocoaPods (**Martin**)
* [2 hr] Concurrency and Networking (**Josue**)
  + Interacting with external APIs (w/URLSession)
  + Parsing JSON data
  + Async functions and how to handle them.
* [2 hr] Persisting data - Saving data in iOS - Realm (**Josue**)

Day 4, Sunday August 1st (4 hours available)

* [1 hr] Debugging Tools (**Xcode Instruments**) (**Josue**)
  + LLDB
* [1 hr] The Journey continues - next topics in the path as a mobile developer. (**Hugo**)

**The project**

Simple App with:

* Two-View app
* Fetch Pokemon from API
* Search view of pokemons | Pokedex -> (TableView, searchable)
* Detailed View -> (info. Save and delete)
* Pokemon can be saved and deleted from Realm
* iPhone only, MVVM
* EXTRAS: Select 2 pokemons and simulate a battle.