

iOS App Final Project

# Pokémon AR

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# Section 1 : What am I doing?

App 功能介紹



# App功能介紹

App Name : Pokémon AR

Motivation : For a long time, some questions always haunt me. That is, can Pokémon Go actually equip with full potential of AR? Can Pokémon Go be more like its predecessor?

# App功能介紹

Our app Pokémon AR actually unlock full potential of AR with Machine Learning!

We use Tensorflow Lite's object detection(MobileNet) to embed monsters' locations.

And even more! With Firebase supports, our Pokémon AR is able to provide user to battle with others, by using Internet.

# Section 2 : 相近App 介紹

Pokémon Go 介紹



# 相近App 介紹 - Pokémon Go

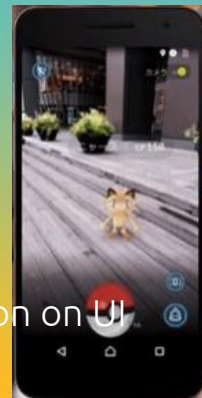
## Features :

- With location-tracking it is able to combine exercise and health related iOS monitoring
- Dojo tower quests by collaborating with other players.
- AR based Pokémon-catching interaction



## What i like about it :

- Nicely done tutorial navigation on UI design
- AR embed ball-throwing mechanism
- Map location tracking with sight-seeing landmark collaboration
- Collect Pokémon and fill up your pokédex as an achievement



# 相近App 介紹 - Differences

1

## Expand possibility of AR

By using Tensorflow Lite, we replace common object with Pokémon, and let there be Pokémon-detection instead of Object-detection. Once detected, it appears on your phone with AR 3D model.

2

## Classic Pokémon battle

Miss the old Pokémon battle mechanism? We here to introduce you our battle method between AR and Classic!

3

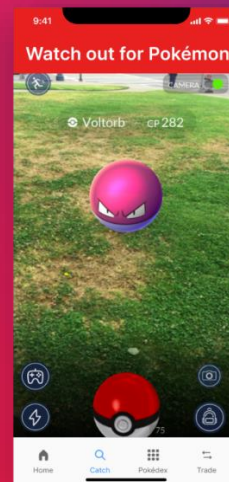
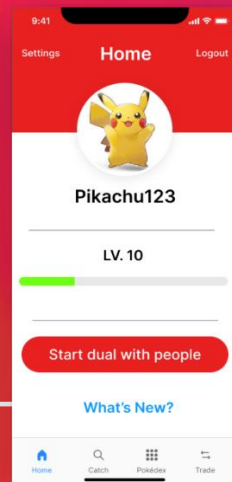
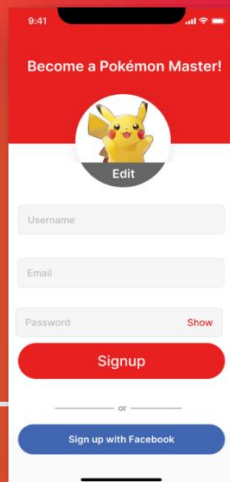
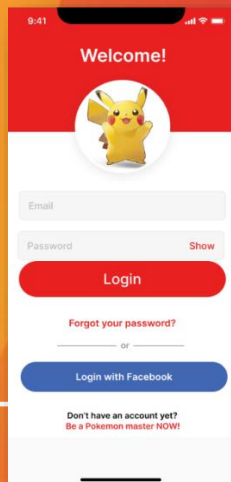
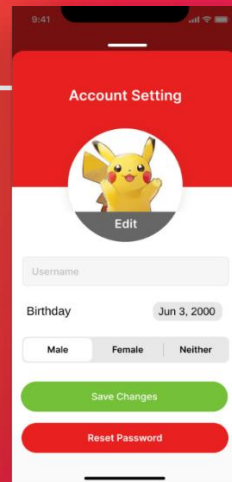
## 3D Model preview

You can use Pokédex to view each 3D model of your owned Pokémon and get to know them better.

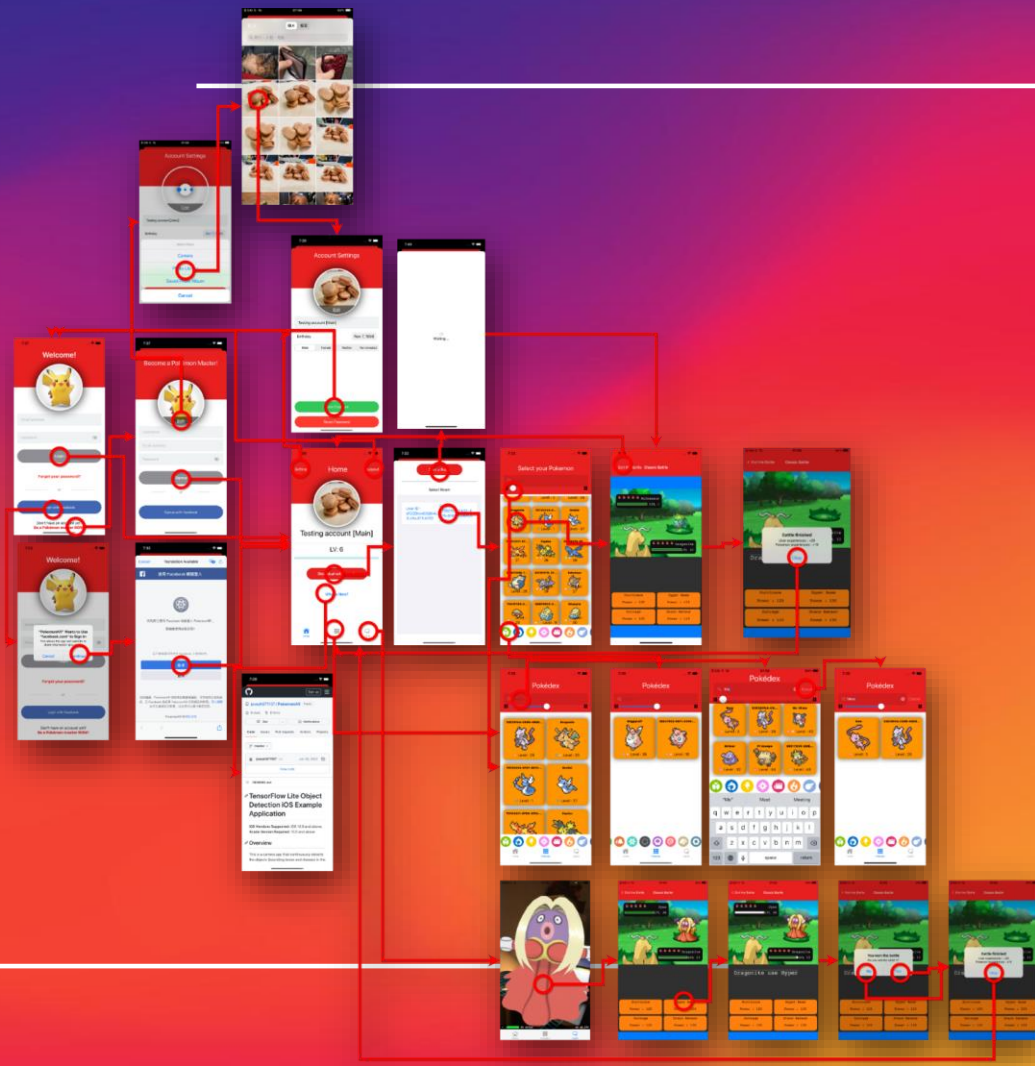
# Section 3 : Introduce views



# Views



# Prototype



# Section 4 : What parts of iOS will it use?

# What parts of iOS will it use?

- UINavigationController
- GeometryReader
- Toolbar
- TabView
- ScrollView
- LazyGrid
- UISearchController
- UIViewControllerRepresentable
  - Mix with UIKit and SwiftUI
- WKWebView
- SCNView
- Camera/Photo library
- CocoaPods
- TensorFlowLite
- AVFoundation
- ARKit
- SceneKit
- JavaScriptCore
- Combine
- Firebase
- Firebase Firestore
- Firebase Storage
- Firebase Auth
- Facebook Authentication

# Section 5 : Environment Setup

# Github link

Github Repository

Follow README.md inside repository to setup the project (also download).

# References

Extensions:

- [ImagePicker](#)
- [UIViewController+Alert Prompt](#)
- [UIImage](#)
- [View+Keyboard events](#)
- [SpinnerView](#)
- [AsyncImage](#)
- [TextAlert](#)
- [LabelledDivider](#)
- [ScallingCircle](#)
- [SearchBar](#)
- [JSWebView](#)
- [UIImage](#)
- [Array+random get](#)