



TRẦN TRUNG DŨNG

iOS DEVELOPER

A dedicated Apple Developer

Presently works as an **iOS Engineer** at **CELEBe Korea Co., Ltd.** and as a **Research Associate** at the **School of Computer Science & Engineering, International University (VNU-HCMC)**. I have over 10 years of both practicing and actual experience developing for iOS and macOS. Since I was in sixth grade and iOS still adhered to the *skeuomorphic* design language, I have been the award recipient of numerous awards from city to national-level events for competitive sport programming, software and hardware development. I also conduct research in the fields of *computer vision*, *computer graphics*, *augmented reality*, applied *artificial intelligence* and on-device *machine learning* utilizing mobile applications and other Apple-oriented platforms. Beside the coding work, I am also a proactive *graphic*, *branding*, and *motion* designer.

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Education

BSc. in Computer Science: International University (Engineering) - *Vietnam National University HCMC*.

Employment History

CELEBe Korea Co., Ltd: iOS Engineer (4+ years entry)

(Full-time) - Being a leading member of a 4-member team and controlling about *half the portion of features*, including some *technically challenging* ones throughout the application. Developing a short-form video oriented social network and entertaining application (that has over 2 million users) with the main focus on the cryptocurrency token reward called fanC coin.

Vietnam National University HCMC: Research Associate

(Contract) - Some of my research interests are computer vision, computer graphics, augmented reality, applied artificial intelligence and on-device machine learning utilizing mobile applications and other *Apple-oriented* platforms.

Reference

Mr. Lee Jae Woong

Core Developer Team
CELEBe Korea Co., Ltd.

woong4702@celebe.io

Mr. Lee was the team leader of the core developer team, work closely with me for a significant period.

Languages

- Vietnamese (Native)
- English (Professional)
- Russian (Elementary)
- Korean (Elementary)

Programming

Swift, Objective-C, Objective-C++, C, C++, Python, Ruby, Java, JavaScript, HTML, CSS, XML, LaTeX, Markdown,...

Awards

Award Recipient: Swift Student Challenge (WWDC21) - *Apple* · Jun 2021

Second Prize: Nationwide Contest for excellent students in Informatics - *Vietnam Ministry of Education and Training* · Jan 2016

- For the discipline of Hardware Development.

Second Prize: ICT Nationwide Contest - *Vietnam Ministry of Education and Training & the Central Committee of Youth Union* · Aug 2015

Second Prize: Citywide Contest for excellent students in Informatics - *Department of Education and Training* · May 2015

2x Second Prize: ICT Citywide Contest - *Department of Education and Training & the Committee of Ho Chi Minh City Youth Union* · 2014 & 2015

- For the discipline of Software Development.

Technical Stacks

Editors: Xcode, Visual Studio, VS Code, IntelliJ, PyCharm, Sublime.

Version Control: Git, Bitbucket, Sourcetree, GitHub, GitLab.

Databases: CloudKit, Core Data, Realm, PostgreSQL, MySQL, SQLite.

Cloud Hosting: AWS, Cloudflare, DigitalOcean, Firebase, GitHub Pages, Google Cloud.

Data Analysis & ML: Core ML, TensorFlow, PyTorch, scikit-learn, Keras, pandas, numpy, Kaggle, Google Data Studio, coremltools.

CI/CD: Xcode Cloud, Jenkins, Fastlane, Circle CI, GitHub Actions.

Distribution: AppStore Connect, TestFlight, Firebase Distribution.

Operating System: iOS, macOS, watchOS, tvOS, visionOS.

Design: Google Fonts, Adobe Fonts, Adobe Suite, Creative Cloud, Ps, Ai, Lr, Xd, Ae, Pr, Dw, Figma, Zeplin.

Communication: Jira, Confluence, Trello, Slack, Zalo, Notion, ClickUp.

Cryptocurrency: fanC, Ethereum.

Grants

C2022-28-10: Face recognition enhancement utilizing on-device machine learning.

This research was funded by Vietnam National University, Ho Chi Minh City (VNU-HCM) under grant number C2022-28-10 (level C).

Total funding: \$3.500. I am the main co-investigator.

Link: <https://research.vnuhcm.edu.vn>.

B2023-30-05: Developing a federated learning algorithm for autonomous attendance systems based on camera and long-range RFID.

This research was funded by Vietnam National University, Ho Chi Minh City (VNU-HCM) under grant number B2023-30-05 (level B).

Total funding: \$29.000. I am a key member.

Link: <https://ord.hcmiu.edu.vn>. (Item No.16 - Projects from 2023-2024).

Hobbies

Design, Decorate, News, Badminton, Politics, Setups, Reels, Gaming, Classical Music, Piano, Languages, Reading, Research, Infographics, Movies, Horoscopes,...

Frameworks Experiences

UIKit: I have extensive experience working and practicing with UIKit for more than 10 years, both in Swift and Objective-C.

SwiftUI: Developed several apps that have SwiftUI as their structure; one of them is the *set of attendance-checking applications* that are currently operating at the campus of VNU-HCMU.

User Notifications, Authentication Services: I have expertise developing *notification components* for a number of projects, as well as *deep links, universal links, and associated links*. I also engaged with third-party authentication (Email, Phone, Apple, Google, Kakao, LINE, etc.) via Firebase and several of its other services.

AVKit, ARKit: Employed these frameworks as components of some of my research projects and at CELEBe, where we continuously exposed ourselves to them to develop *short-form videos* and some other *camera-related features*.

SpriteKit, SceneKit, WidgetKit, MapKit: Before entering the professional workforce, I spent some time developing *games* and *personal projects* as a hobby when I was a high school and college student. Some of them were *published* on the AppStore but are now taken down.

Core ML, Vision, Accelerate: I have published a few papers and is working on a few more that are *on-device machine-learning-oriented*. Those projects with the topic of objects, text and face recognition have the help of these libraries.

Core Graphics, Core Animations, Core Image, Core Video, Core Text: Making custom controls is an enjoyable experience. Some rigorous components were made over the years.

Core Data, Core NFC, Core Bluetooth: Because my *most prominent* research project includes RFID and NFC as important aspects, handling the connections and recovered payload data is also a remarkable experience. These frameworks assisted me with those tasks.

Metal: I am still a beginner to Metal but am currently very adaptive to it, I believe I can be a good fit for a project that is *graphics, image or video editing-oriented*.

Combine, Alamofire, RxSwift, ReactiveKit: Because networking and binding are compulsory skills. I have had significant exposure to these libraries.

Publications

[1] **AttendanceKit:** A set of Role-Based Mobile Applications for Automatic Attendance Checking with UHF RFID using Real-time Firebase and Face Recognition - *In proceedings of FDSE 2022*

DOI: https://doi.org/10.1007/978-981-19-8069-5_29.

[2] **To wrap, or not to wrap:** Examining the Distinctions Between Model Implementations of Face Recognition on Mobile Devices in an Automatic Attendance System - *SN Computer Science Vol. 4*

DOI: <https://doi.org/10.1007/s42979-023-02185-2>.

Patents (including pending)

VN patenting: iOS Machine Learning Model Encapsulation Method.

- Patent App. 1-2023-00577 · Filed Apr 28, 2023.

VN patenting: Autonomous attendance system based on mobile applications and UHF RFID.

- Patent App. 2-2023-01347 · Filed Apr 12, 2023.