Giovanni Salinas

Taipei, Taiwan (R.O.C) | gsalinaslopez.eic05g@nctu.edu.tw | +886 919204040
linkedin.com/in/gsalinaslopez | github.com/gsalinaslopez | Python, Java/Kotlin, Swift

Experience

Appier (沛星互動科技) *Apr 2022 - Present*
Software Engineer *Taipei, Taiwan*

- Enhanced the internal testing suite scalability for **Android/iOS/React Native/Flutter** mobile SDKs by developing a single unified codebase for all platforms using **Appium**
- Conducted release process verification by modifying the internal **Android/iOS** testing apps and implementing automatization scripts

ACpay (交流資服) *Feb 2021 - Feb 2022*
Software Engineer *Hsinchu, Taiwan*

- Improved the company's payment terminal device **Java/Kotlin/Android** application by fixing existing issues and adding new features following Android's app architecture best practices
- Enhanced the app's robustness and maintainability by using Android's native architecture components library, Unit Testing, and Continuous Integration/Deployment
- Composed documentation and UML diagrams describing the app's software structure and its different modules

Industrial Technology Research Institute (工業技術研究院) *Jan - Jun 2018 | Jul - Aug 2017*
Software Developer. *Part-time (2018) | Internship (2017)* *Hsinchu, Taiwan*

- Developed a **Java/Android** encoder/decoder *(BER)* API wrapper for intelligent transportation networks by porting a native **C** runtime library *(ASN.1 C)*
- Implemented **Java/Android** high-level API wrappers for interfacing with the device's LTE Evolved Multimedia Broadcast Multicast Services *(eMBMS)*

GeoThings (究心科技) *Dec 2015 - Aug 2016*
Software Developer. *Part-time* *Hsinchu, Taiwan*

- Designed UI/UX for an **iOS/Swift** mobile mapping tool by writing RESTful callbacks for fetching, processing, and displaying map information from OpenStreetMap
- Implemented a map tagging feature that uploads user-contributed data to the OpenStreetMap project database using RESTful

Education

National Chiao Tung University (國立交通大學) *October 2020*
Masters in Electrical Engineering and Computer Science. *GPA: 3.61, Percentile: 81.48/100* *Hsinchu, Taiwan*

National Chiao Tung University (國立交通大學) *June 2016*
Undergraduate in Computer Science. *GPA: 2.85, Percentile: 73.13/100* *Hsinchu, Taiwan*

Coding Projects

MagRSS
Personal Software Project

- Created a Machine Learning Project with the goal of identifying what road lane a user is located
- Wrote an **Kotlin/Android** application that continuously captures LTE Base Station Access Points signal intensities, magnetometer, and GPS coordinates, allowing the categorization of signal fingerprints as 'road lane' labels used for training
- Implemented data filtering subroutines in **python/pandas/numpy** used for cleaning and preprocessing noisy signals
- Collected training data using the MagRSS application by going around campus and labeling certain routes depending on where the logs were taken. 120k entries total for demonstrating the proof-of-concept
- Developed a Back Propagation Neural Network in **python/tensorflow** that is trained on the collected data and makes predictions on test data. Achieved close to 90% accuracy

RadioCapullo
Personal Software Project

- Developed a free and open-source **Kotlin/Android** application for music broadcasting and multi-device listening
- Integrated and ported native/NDK library used for LAN broadcasting and oboe player playback
- Implemented Network Service Discovery to advertise on-device HTTP/Zeroconf server for connecting with Spotify
- Designed IPC communication between network broadcasting and playback services

ROS Drone Controller
Masters Research Project

- Installed a Robot Operating System (ROS) service instance on a drone controlled by a Raspberry Pi
- Developed an **Kotlin/Android** application that brings the user a Joystick UI and sends flight instructions to the ROS controlled drone
- Setup a TCP socket connection between an Android application and the ROS controlled drone, both of which were connected to a special LTE testbed network provided by school for experimental purposes

Position Sensor
Masters Research Project

- Developed a **Java/Android** application that uses the built-in accelerometer and gyroscope and implemented an Inertial Navigation Unit (INU)
- Enhanced INU signals by applying a Kalman-Filter that constantly adjusts on feedback from the sensors
- Displayed the path the user has taken so far on-screen

Research Publications & Academic Awards

IEEE International Conference on Communications (ICC) *May 2018*
Second Author. Conference Presenter *Kansas City, MO, USA*

- *"V2PSense: Enabling Cellular-Based V2P Collision Warning Service through Mobile Sensing,"* C. Li, **G. Salinas,** P. Huang, G. Tu, G. Hsu and T. Hsieh.

National Chiao Tung University Scholarship *Sep 2016*
Scholarship Recipient

- Outstanding new student award - Masters Program
- Scholarship awarded to Degree-seeking foreign students that consisted of tuition fee waiver and a monthly allowance to cover basic living expenses

Ministry of Foreign Affairs (MOFA) Taiwan Scholarship *Aug 2011*
Scholarship Recipient

- Selected as 1 out of 15 awardees at a National (Nicaragua) level by MOFA of the Government of Taiwan based on academic merit to undergo Mandarin Chinese Language studies at a Taiwanese Language Center, followed by Higher Education (Undergraduate) studies at a Taiwanese University
- Scholarship program consisted of monthly allowance for 5 years to cover tuition and living expenses

Technical Skills

Software Tools

- **Python**: Testing Suite (pytest), **Mobile App development**: XCode *(iOS - Swift)*, Android Studio *(Android - Java/Kotlin)*, **CI/CD**: Jenkins, GitHub Actions, **Version Control**: Git

Language

- **English**: Advanced *(TOEFL iBT score 104/120)*, **Mandarin Chinese**: Intermediate/Advanced *(TOCFL score 80/100)*, **German**: Basic/Intermediate *(TestDaf B1 certificate)*, **Spanish**: Native