

Immanuel Amirtharaj

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SUMMARY OF QUALIFICATIONS

- **Languages:** C++, Objective C, Swift, C, Java, Python, Matlab, SQL, JavaScript, PHP, R
- **Development Technologies:** Angular.js, AWS (S3, EC2), Express.js, iOS (Cocoa Touch, Core Location, Bluetooth, Animation), Flask, Git, React, SVN
- **Operating Systems & Runtime Environments:** Linux (Ubuntu, Raspbian), iOS, macOS, Node.js

INDUSTRY & RESEARCH EXPERIENCE

Santa Clara University Internet of Things Laboratory - June 2017 - Present

Graduate Research Assistant

- Developed the software for EMPIOT, a platform built with the INA 219 chip and Raspberry Pi as an accurate and cost efficient alternative to measure power consumption on IoT devices.
- Implemented different algorithms for data collection and evaluated different I/O libraries to optimize performance and energy efficiency.
- Currently analyzing and researching methods to optimize the boot time of Linux in embedded devices in the kernel and user space level.

Apple Inc. (FileMaker) - June 2016 - September 2016

iOS Software Engineering Intern

- Implemented the user interface and business logic for OAuth 2.0 authentication in FileMaker Go 16
- Implemented the user interface for the updated settings and login workflow.
- Participated in design reviews and collaborated with quality assurance for testing.
- Performed accessibility and localization updates and fixed bugs throughout the codebase.
- Gained experience in UIKit, iOS application states, localization, and accessibility.

WeatherSphere - April 2015 - September 2015

iOS Software Engineering Intern

- Reimplemented the UI for the existing Fishing Spots application for its next release.
- Implemented new features including an updated newsfeed and a new profile page.
- Integrated the application with internal web APIs for data retrieval.
- Used Grand Central Dispatch and NSCache to increase responsiveness and decrease loading time.

EDUCATION

Santa Clara University

- M.S in Computer Science and Engineering with Data Science Emphasis, **June 2018**, GPA: 3.525
 - Coursework: Data Mining, Web Search, Cloud Computing, Machine Learning
- B.S in Computer Science and Engineering with Minor in Mathematics, June 2017, GPA: 3.328
 - Coursework: Algorithms, Data Structures, Database Systems, Computer Networks, Operating Systems, Computer Architecture, Compilers, Statistics

LEADERSHIP EXPERIENCE

Teaching Assistant at Santa Clara University - September 2017 - Present

- Responsible for leading lab sessions and holding office hours for the following classes: Intro to Web Programming, Computer Networks, Intro to Matlab, and Advanced Programming in C.

SELECTED PROJECTS

HIIT Sessions - [View on App Store](#)

- An iOS application which allows users to create and time their HIIT workouts.

Linda Coordination Model for Distributed Systems - [View on Github](#)

- A Java implementation of the Linda distributed system which supports addition and removal of nodes, and CRUD operations on data.
- Used consistent hashing to make the system redundant and fault tolerant.

Project SeetiTel - 2nd place (out of 12 teams) at SCU's Broncohack Hackathon

- Worked in a team of 3 to build an platform where individuals can anonymously and securely share illegal activity via SMS.