GARFIE CHIU

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❯ EDUCATION

University of Illinois at Chicago
Computer Science B.S. (Spring 2019)

❯ SKILLS

LANGUAGES	TOOLS
Kotlin	Android Studio
Java	Git
PHP	Gradle
SQL	Docker
Python 3	Apache
C++	MySQL
C	Vim
HTML/CSS	

❯ COURSES

Software Development for Mobile Platforms

Databases

Software Engineering I

Introduction to Networking

Computer Systems

Software Design

Programming Languages Design and Implementation

Languages and Automata

Data Structures

Computer Design

Machine Organization

❯ INVOLVEMENT

Engineering Design Team
System Administrator
May 2017 - May 2019

EVO Dance Troupe
Member
Jan. 2016 - Dec. 2016

❯ VOLUNTEERING

UIC College Prep,
Teaching Assistant for Robotics Club
Oct. 2015 - Jan. 2016

❯ EXPERIENCE

BMW Technology Corporation, *Software Engineering Intern*   May 2018 - May 2019
- Developing an Android library to streamline use of multiple geographical map providers
- Created an Android app to enable digital payment of snack purchases for employees
- Assessed impact of Findmate with Android Oreo behavioral changes
- Investigated state of automated UI testing on the Android platform for UX validation
- Deployed smartphone testing farm with Docker for efficient remote testing on devices
- Refactored legacy login system to replace RxBindings into combined observable streams
- Identified and documented solutions to build issues with the BMW Connected app

Engineering Design Team, *System Administrator*   May 2017 - May 2019
- Maintaining and securing ubuntu server running various critical services
- Identifying issues and fixing various legacy websites
- Assessing server hardware and software for performance bottlenecks
- Created a testing server for testing fixes and staging purposes
- Migrated content to new website

Engineering Design Team, *Robocode*   Jan. 2018 - Mar. 2018
- Contributed to various design ideas for targeted audience
- Collaborated on gampeplay storyboard, objectives, and game details
- Proposed revised architecture for product

❯ PROJECTS

Car Dex
- Developed a geocaching game integrating Smartcar's APIs into an Android app
- Deployed game server to handle OAuth and user data
- Used Kotlin, PHP, Smartcar Android SDK, Dagger 2, Retrofit, Google Maps SDK, OAuth
- Won first place at the .dev x Smartcar Hackathon

Where Am I
- Developed a cross-platform API that determines location with room-level precision
- Assessed feasibility of using fingerprinting network signal strengths for geo-fencing
- Explored various platforms' system APIs for data collection
- API written in Kotlin using the facade pattern

Course Availability Tracker
- Created an application that polls course registration pages to check for availability
- Analyzed server responses using Burp Suite to examine site behavior
- Utilized AutoRemote API to send notifications to Android devices
- Program written in Python using the Beautiful Soup library

Ventra Card Emulation
- Researched EMV smart card communication protocols
- Interpreted test card data to simulate a RFID transit card via NFC
- Captured APDU responses from a card using an android APDU emulator
- Created a proof-of-concept Android app to further test findings
- Used Android Studio, Java, and host-card emulation APIs

Smile Bot 5000
- Developed an Android app that scans for smiles which illuminates an exhibit
- Utilized serial communication between Android and Arduino for data transmission
- Used Arduino, Kotlin, Firebase ML Kit, RxRelay, CameraKit, and Arduino-Library

Arduino Musical Instrument
- Created a musical instrument that uses proximity to determine pitch of sound
- Combined arduinos for two dedicated processes: tone generation and data collection
- Integrated bit shifting to simultaneously transfer one byte at a time
- Used Arduino and C