MICHAEL YU

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EDUCATION

The University of California, Los Angeles	BS, Computer Science	2019-2023
University High School	Highest Honors, GPA: 4.6/4.0	2015-2019
Relevant Courses Taken	Intro to Computer Science (C++), C Programming (C), AP Computer Science (Java), Intro to Computer Systems	

WORK EXPERIENCE

Networked and Game Systems Laboratory, University of California Irvine – Research Intern 06/2018 - 09/2019

- Developed secure joining protocol using Java, Python, and Linux Bash
  - Reduced data transfer times by 50% by implementing data serialization method which allowed for greater amounts of data to be sent over sound
  - Built custom Java library for AES encryption and decryption of data payloads
  - Automated Raspberry Pi network processes using Linux Bash scripts
  - Implemented data-over-sound device communication using Python, Java, and Chirp.io SDK
- Developed native Android application used to conduct patient trials for iXercise platform using Java and Chirp.io SDK
  - Enabled researchers to upload patient trial data using their phones by implementing a UDP Client-Server to communicate with middleware
  - Provided in-app access to real-time biometric data by designing a background service that polls data being broadcast on the network
  - Incorporated network discovery of medical exercise bike using native Android Network Service Discovery
  - Implemented user authentication for the administrative interface using the OkHttp Library

Rescue Robotics Competition, University of California Irvine – Team Lead 08/2015 – 06/2017

- Designed and built an autonomous quadcopter using Python, OpenCV, Fusion360, and Mission Planner
  - Implemented blob detection of orange buckets using Python and OpenCV
  - Provided on-board location tracking and camera functions using Raspberry Pi
  - Developed search methodology using Mission Planner which resulted in my team placing 1st in the design review competition
  - Designed and 3D printed custom parts using Fusion 360 CAD software

PROJECTS

Easy Planner

- An Android application that creates a digital planner using text extracted from user-uploaded images
- Currently available on the Google Play Store with over 1,300 installs
- Extracted text from images using Google's Mobile Vision API
- Placed 3rd in California Congressional District 48 for the 2017 Congressional App Challenge

Nothing But Stats

- A website, app, and REST API that displays NBA player data using React, Spring Boot, and Firestore
- Automated removal of unnecessary Firestore documents and collections
- Prevented unauthorized API requests by implementing basic HTTP authentication
- Incorporated JSON serialization and deserialization using Gson library

Playlist Tracker

- An Android application and REST API that backups a list of local music playlists and songs to the cloud using Java, Spring Boot, and Firestore
- Reduce the number of expensive file queries necessary by implementing an Android Room database that provides faster access to local playlist files
- Utilized Retrofit library to make asynchronous POST and GET requests to REST API

ADDITIONAL INFORMATION

Technologies: Java, Spring Boot, JavaScript, React, Native Android Development, Retrofit, Gson, Git, Firestore, Fusion 360
Awards: National 4th Place in FBLA Cybersecurity Event, NASA International Space Settlement Design Competition Finalist, 3rd Place Congressional App Challenge District 48, 1st Place UC Irvine Rescue Robotics Design Competition
Languages: Native English; **Citizenship**: United States