

# Michael Yu

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## Education

### University of California, Los Angeles

Bachelor of Science in Computer Science

Los Angeles, CA

Sept. 2019 - Jun. 2023

## Experience

### University of California, Irvine

Research Intern at the Networked and Game Systems Lab

Irvine, CA

Jun. 2018 - Present

- Developed secure joining protocol using data-over-sound communication
  - 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
  - Implemented data-over-sound device communication using Chirp.io SDK
- Developed native Android application used to conduct patient trials for iXercise platform
  - Bundled all functions necessary to record and conduct patient trials into a single application
  - 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 heart rate data by designing a background service that polls heart rate data being broadcast on network
  - Incorporated device discovery using Android's native network service discovery implementation
  - Implemented user authentication using OkHttp Library

## Projects

### Playlist Tracker

- A native Android application that backups a list of local music playlists and songs to the cloud
- Reduced the number of expensive file queries necessary by implementing Android Room database that provides faster access to local playlists
- Implemented Spring Boot REST API with a Google Firestore database
- Utilized Retrofit library to make asynchronous POST and GET requests to REST API

### Nothing But Stats

- A React website and React Native app that displays NBA player stats
- Implemented Spring Boot REST API with a Google Firestore database
- Automated removal of unnecessary Firestore documents and collections
- Prevented unauthorized API requests by implementing basic HTTP authentication
- Worked with Gson library for JSON serialization and deserialization

### Easy Planner

- An Android application that creates a digital planner using text extracted from user-uploaded images of homework boards
- Currently available on the Google Play Store with over 1,200 total installs
- Extracted text from images using Google's Mobile Vision API
- Placed 3rd in California Congressional District 48 for the 2017 Congressional App Challenge

## Skills

**Technologies** Java, Spring Boot, JavaScript, React, Native Android Development, Retrofit, Gson, Git, Firestore