

# NICK CHEN

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## EDUCATION

**University of Southern California**, Viterbi School of Engineering  
*Bachelor of Science*, Computer Engineering and Computer Science  
*Minor*, Communication Policy and Law

**Expected Graduation:** May 2022  
3.29 GPA

**Honors:** USC Presidential Scholar, National Merit Scholar

**Coursework:** Data Structures, Embedded Systems, Distributed Systems and IoT, Intro to Software Engineering

## EXPERIENCE

**Alpha Phi Omega National Service Fraternity, USC Chapter** December 2019–Present  
*Full Stack Web Developer* Los Angeles, CA

- Moved the infrastructure from InMotion to a custom LAMP stack on AWS (EC2, EBS, Route 53, S3)
- Refactored and restructured 9+ year old website, fixing deprecations caused by updating from PHP 5 to PHP 7
- Implemented situation-dependent SMTP email notification upon update to database using Mailgun's API

**USC Rocket Propulsion Lab (RPL)** August 2019–Present  
*Production Systems DevOps Engineer* Los Angeles, CA

- Created images and containerized RPL's Node.js+PostgreSQL web apps by configuring Docker compose files
- Automated daily data volume backups and biweekly backups pruning with cron jobs

**USC Software Architecture Research Group** January 2019–February 2019  
*Research Assistant* for Professor Nenad Medvidovic, Ph.D. Yixue Zhao Los Angeles, CA

- Implemented the Prediction By Partial Matching (PPM) web prefetching algorithm in Python on Jupyter Notebook

**University of Central Oklahoma CS Department** July 2017  
*Research Assistant* for Dr. Jicheng Fu Edmond, OK

- Rebuilt each component of an Android application from the ground up and modernized the UI on Android Studio
- Created a Java API that interpreted gyroscope/accelerometer sensor information and displayed it graphically

**Szechuan Bistro** May 2014–August 2019  
*Interim Manager, Waiter/Server* Edmond, OK

- Trained new waiters/servers in the Point of Sale system, guest services, proper food handling, and other duties
- Allocated tasks to employees, managed and restocked inventory, and resolved conflicts with unhappy customers

## PROJECTS

**My Virtual Item Requisition Upgrade Simulator (myvir.us)** November 2019–December 2019  
*Website where users can download a game with a bitcoin mining virus hidden in the install files*

- Fully deployed website using GCP (Cloud MySQL, Cloud Compute Engine), Tomcat Java Servlet, and Namecheap
- Wrote a Bitcoin Miner script that attempts to mine bitcoin then sends results back to the server over UDP in Python

**Command Line Merchant Store** February 2019–April 2019  
*C++ application based on Amazon with features such as user registration/login, product stock, carts, and checking out*

- Developed the file dependent, data-persistent OOP system of Users, Products, and Reviews
- Implemented from scratch string tokenization, comparators, binary heaps, A\* search, and other data structures

**Moderation Tools for College Admissions Hub Online Community** February 2018–March 2018  
*Chat moderation bot for the 3,500 member community written using the Java Discord API*

- Integrated an automated chatbot that automatically screened new member to reduce spam messages and bots
- Implemented assignment and removal commands for roles such as Applying, Undergrad, and specific universities

## SKILLS

**Proficient Languages:** C++, Java, Python, Javascript, SQL

**Familiar Languages:** C, C#, PHP, CSS, HTML

**Other:** Linux, Git, Web Deployment, AWS, GCP, Apache, Docker

## LEADERSHIP

**Society of Asian Scientists and Engineers (SASE), USC Chapter** August 2019–Present  
*Founder, Co-President, Viterbi Presidents Council Representative, USC's SASE Regional Representative*