

# Alan Qi Chen

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## Education

### Ohio State University

B.S. Computer Science & Engineering GPA: 3.937

Columbus, OH

Aug. 2019 - May 2023

Relevant Coursework: *Principles of Imperative Computation (CMU)*, *Software 1*, *Software 2*, *Systems 1*

## Skills

Languages: C, C++, Java, HTML, CSS, JavaScript, Go, Python, PostgreSQL, Redis  
Technologies: Git, Docker, Linux

## Experience

### United Launch Alliance | Software Engineer Intern

Denver, CO

- Upcoming summer internship

May 2021 - Aug. 2021

### Caesar Creek Software | Software Engineer Intern

Miamisburg, OH

C, Docker, Ghidra, Git, Python

May 2020 - Aug. 2020

- Used reverse-engineering concepts including DLL-injection and return-oriented programming
- Developed a TFTP client in Python, and a Linux kernel module in C to give user mode access to memory
- Created a primitive debugger in C used in an internal project to write breakpoint instructions in memory

## Projects

### Bear Blog Engine | Personal

example.aqchen.com

Docker, Git, Go, Next.js, PostgreSQL, React, Redis

- Developed a REST API to interact with databases for a blog engine including JWT authentication
- Created a search-engine-optimized and progressive web application frontend utilizing server-side rendering and redux with an admin dashboard to manage posts and editors
- Reduced API request times by 33% using caching in Redis and page load times by 50% using incremental static regeneration
- Integrated Docker and GitHub actions for continuous deployment and development

### College Cheque | Team

aqchen.pythonanywhere.com

CSS, Flask, Git, HTML, JQuery, Python

- Created a web application that lets students and parents a tool to receive personalized financial information on over 5,800 US colleges to aid the college decision process
- Used python to parse over 5,000 rows of colleges with incomplete data
- Winner of JPMorgan Chase's "Best FinTech for Good" challenge

### Autonomous Robot | Software Lead, Course Team Project

robot.aqchen.com

C++, Git, MATLAB, SolidWorks

- Built a PI controller in C++ to autonomously move a tri-omniwheel robot on a course to complete tasks faster than any other team using pregenerated coordinates and velocity
- Added course calibration, error correction, and PI controller error logging to tune to above 99% accuracy
- Designed the robot from scratch in SolidWorks and continuously improved the design after tests
- Created detailed documentation for the code and PI controller design using Doxygen and Sphinx
- Completed required biweekly milestone tests three days early with a constrained budget

### Toonify | Personal

toonifyapp.aqchen.com

Android, Java, OpenCV

- Built an Android app to apply images filters using the OpenCV library on new or existing photos
- Used neural transfer style models with OpenCV to apply various art styles on images

## Activities

### Code 4 Community | Backend Team

Aug. 2019 - Present

MongoDB, Node.js, React

- Creating a web app for OSU professors and mental health researchers which will allow adolescents with mental health issues to receive articles, activities, and surveys
- Implemented API routes for the backend including fetching posts, registering, and logging in

## Awards

### Challenge Winner and Overall Finalist

Hack OH/O

Winner of JPMorgan Chase's "Best FinTech for Good" Challenge out of 19 competing teams and overall

Finalist out of over 700 attending students

Nov. 2019

### Maximus Scholarship

The Ohio State University

Awarded for academic achievements, including top 3% of class rank

Autumn 2019