

# ALAN Z. CHEN

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## EDUCATION

### University of California, San Diego

B.S. Computer Science  
Cumulative GPA: 3.3/4.0

San Diego, CA  
Expected Graduation: June 2018

**Notable Courses:** Data Structures, Algorithms, Database Systems, Programming Languages/Paradigms, Computability Theorem, Operating Systems, Computer Architecture, Artificial Intelligence, Data Science, Computer Security

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## SKILLS

**Languages & Frameworks:** Java, JavaScript, C++, C, Python, Perl, C#, Node.js, AngularJS, PHP, MongoDB, MySQL, PostgreSQL, ASP.net, ARM Assembly

**Tools:** gdb, Make, Linux, jdb, Junit, Git, Vim, Android Studio, Visual Studio, Raspberry Pi

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## EXPERIENCE

### Learning Equality

Software Development Intern

San Diego, CA  
*Sept 2017 – Present*

- Provided assistance in optimization of the Python- and Javascript-based web application Kolibri, an open-source platform that provides offline, self-paced learning resources for students in areas with limited connectivity
- Improved UI/UX of application through frontend development of Kolibri using the Vue.js framework and Webpack
- Worked with Python backend using Django and SQLite

### Hologic Inc.

Software Engineering Intern

San Diego, CA  
*Jun 2016 – Aug 2016*

- Created a web-based lab tool that displays medical test results in tables and graphs with Node.js, C#, MongoDB, and Google Charts
- Researched pros/cons of various client-side and server-side architectures (JavaScript, AngularJS, Express.js) for cross-platform lab tool integration
- Developed tools in C# to identify where spikes in hindering activity occur when running the testing machines

### EMC Corporation

Software Intern

Beijing, China  
*Jun 2015 – Aug 2015*

- Created automated test scripts for localization in Perl
- Parsed various file types and converted them to XML

### Delta Product Corporation

Software Intern

San Diego, CA  
*Jun 2013 – Aug 2013*

- Created Android applications to work with geolocation data and GPS functions to integrate with company tools

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## PROJECTS

### Network Security | Python/Wireshark/TCP/IP

*Oct 2017 – Dec 2017*

- Successfully carried out man-in-the-middle attacks on a mini network by viewing TCP/IP packets through Wireshark and then manipulating the packets as desired
- Injected iframes into targeted HTML pages while manipulating server to accept changes to the packets

### Web Security | PHP/PostgreSQL

*Oct 2017 – Dec 2017*

- Created a simple blogging website with user login capabilities that emphasizes web security concepts, using PHP
- Reinforced security of website by utilizing salted password hashing and eliminating vulnerabilities against various web attacks, such as SQL injections, XSS attacks, and CSRF token attacks

### Exploit Attacks | C

*Oct 2017 – Dec 2017*

- Utilized various forms of attack on vulnerabilities in code, such as buffer overflow, integer overflow, and memory freeing errors
- Injected shellcode into buffer that would successfully start up a bash shell allowing the user to run as root

### Broommates | Android

*Oct 2015 – Dec 2015*

- Developed an application that distributes responsibilities to members of an apartment with Java, Android Studio, JavaScript, Python, Flask, Django, and MongoDB
- Applied Test-Driven Development and agile development practices to implement a responsive front-end using Android Studio

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## INVOLVEMENT

Eagle Scout (BSA), Taiwanese American Student Association, Badminton, Ping Pong, T'zu Ching