

# SAMUEL HWANG

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## WORK EXPERIENCE

### Applied Medical Resources

*Software Technician I*

Rancho Santa Margarita, CA

*October 2017 - Present*

- Working in a highly regulated R&D workspace with SOP training, documentation updates, and code reviews for all team members
- Creating scripts using AutoIT and Batch to automate user inputs and interact with Windows GUI for build loading and script testing

*Software Development Intern*

*June 2017 - September 2017*

- Maintained and debugged the codebase using PTC Integrity as version control and Jenkins as a continuous integration tool
- Expanded a compiler in C++ to parse if-else statements to increase control flow complexity in our custom scripts
- Built a C++/CLI wrapper library for cross-language communication from a C++ program to the SAP API call in C# to store and retrieve device scripts, expedite production time, and eliminate human error

### UCR Department of Psychology

*Research Software Developer*

Riverside, CA

*May 2017 - Present*

- Working with a team of developers to create a mobile game app along with a website to implement research on Leadership Theory
- Designing the UI (main menu, option configurations, and photo album) for a 'flash memory card' game in Unity
- Developing a RESTful API using Django and AWS to collect and analyze users' play time and score from games
- Expanding the website, <https://mindtapp.com>, to support surveys and managing a PostgreSQL database to store the results

### UCR Department of Sociology

*Research Software Developer*

Riverside, CA

*April 2017 - June 2017*

- Developed social exchange experiments with unique sets of users and rules for each simulation using C++ and the z-Tree application
- Constructed a responsive UI by dynamically calculating the results of exchanges every turn
- Designed corresponding graphics which helped users understand their relationship with other users
- Programming background expedited the team's development process by 400%, creating four different experiments in 10 weeks

## PROJECTS

### 8-Puzzle Solver

- Implemented a console application in C++ and utilized A\* Search to find the solution to an unsolved 8-puzzle
- Compares the run-time of different heuristics used such as Uniform Cost and Manhattan Distance to identify the most optimal steps

### LCD Asteroids

- Created a survival game for two players where player 1 avoided asteroids and player 2 shot projectiles
- Programmed an ATMEGA1284 to control peripherals (LCD screen, buttons, LED lights) to simulate and control the game

## LEADERSHIP

### Theta Tau, Co-Ed Professional Engineering Fraternity

*Corresponding Secretary (2016-2017) | Webmaster (2017-Present)*

Riverside, CA

*2015-Present*

- Assisted Executive Board to maintain chapter relations with over 80 alumni and the 11 surrounding Theta Tau chapters
- Coordinated our chapter's Western Regional Conference with a budget of over \$10,000 for speakers, catering, and activities
- Maintaining our chapter's website as Webmaster: <http://www.thetatauucr.com>

## TECHNICAL SKILLS

**Programming:** C++ (Primary), Python, C, SQL, HTML/CSS, JavaScript  
**Software & Tools:** Git, PTC Integrity, Visual Studio, Unity 5, Xcode, L<sup>A</sup>T<sub>E</sub>X  
**Spoken Language:** English (Native), Mandarin (Limited Working Proficiency)

## EDUCATION

### University of California, Riverside

*Bachelor of Science in Computer Science*

*Expected Graduation: March 2018*

- **Awards:** Highlander's Excellence Scholarship, Dean's List
- **Relevant Courses:** Intermediate Data Structures & Algorithms, Software Engineering, Artificial Intelligence, Embedded Systems, Database Management Systems, Design and Architecture of Computer Systems, Design of Operating Systems, Software Construction, Discrete Structures, Optimization, Technical Communication