# Karen Kong

https://kkong006.github.io/
kong.karen@outlook.com | 951.384.0897

## EDUCATION

**UNIVERSITY OF CALIFORNIA, RIVERSIDE**
Computer Science
Expected Graduation: 2018 | GPA: 3.98

## TECHNICAL SKILLS

**LANGUAGES**
C++ (Proficient) • Java (Proficient) • Python (Familiar) • C# (Familiar)
**SOFTWARE**
Git & Github • VIM • Visual Studio • Android Studio

## COURSEWORK

C++ Object Oriented Programming • Java Objected Oriented Programming • Data Structures & Algorithms • Software Construction • Discrete Structures • Advanced Discrete Structures • Machine Assembly Language & Computer Organization

## LEADERSHIP

• University of California, Riverside Delegate to the University of California Student Congress
• Bourns College of Engineering Day Organizer
• President of Computer Club (2014-2015)

## EXTRACURRICULARS

• Assn. for Computing Machinery (ACM)
• Society of Women Engineers (SWE)
• Brain Game Center Research Assistant

## AWARDS

Entertainment Software Association Computer and Video Game Scholarship (2015, 2016) • University of California, Riverside Regents Scholarship (2015-2018) • Society of Women Engineers Admiral Grace Murray Hopper Scholarship (2015) • Southern California NCWIT (National Center for Women & Informational Technology) Award for Aspirations in Computing (2015)

## WORK EXPERIENCE

**EMBEDDED SYSTEMS LAB RESEARCH INTERNSHIP** | NSF REU
June 2016 – September 2016 | Riverside, CA

- Algorithms for Microfluidic Continuous-flow Chip Design Automation
- Directed placer graph algorithm that increased area utilization by an average of 35%.
- Seam carving post-processing algorithm that increased area utilization by an average of 33% and decreased average route length by an average of 15%.
- Straight path priority, component buffer enforcement, and port assignment optimizations for routing algorithm.
- Paper writing for Asia and South Pacific Design Automation Conference.

## RESEARCH

**EMBEDDED SYSTEMS LAB** | Undergraduate Researcher
January 2016 - June 2016 | Riverside, CA

- Work with **Dr. Philip Brisk** and **Brian Crites** on the Microfluidic Continuous-flow Framework.
- 4 iterative expansion graph algorithms that expand point placement from Chrobak-Payne Straight Line Routing Algorithm to account for areas of components at the points. Increased area utilization up to 23%.
- Corner post-processor that reduces corners on routes to diagonals.

## RECENT PROJECTS

**WALK IN THEIR SHOES** | Grand Prize at the 2016 San Diego Women's Hackathon
Java | Android

- In response to the current global refugee crisis, pairs refugees in need of resources to donors that can provide the specified resources and a forum to communicate with available donors.
- Butter Knife libraries used to bind views to user interface.

**RSHELL** | Software Construction
C++ | Linux

- Terminal shell written in C++ with support from the bin directory, such as "ls" and "grep", standard connectors, including "&&", "||", and ";", input and output redirection, and piping.
- System calls are used for multithreading and executing commands.

**AURORA** | Hacktech Hackathon 2016
Java | Android

- Virtual reality based real estate listing and viewing application.
- Agents post listings with images that are then rendered for clients to experience a home tour using an Android device and a Google Cardboard virtual reality viewer.
- Google Cardboard API and Google Maps API.