Karen Kong

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EDUCATION

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Computer Science
Graduating in 2018 | GPA: 3.98

COURSEWORK

C++ Object Oriented Programming
Java Objected Oriented Programming
Data Structures & Algorithms
Advanced Discrete Structures
Operating Systems
Software Engineering

In Progress

Mobile Wireless Networking
Automata and Formal Languages

TECHNICAL SKILLS

LANGUAGES

C++ (Proficient) • Java (Proficient) • Python (Familiar) • C# (Familiar)

SOFTWARE

Git & Github • VIM • Android Studio • Unity Game Engine • Visual Studio

LEADERSHIP & ACTIVITIES

University of California Student Congress Delegate
Bourns College of Engineering Day Organizer
Computer Club President (2014-2015)
Assn. for Computing Machinery (ACM)
Society of Women Engineers (SWE)

AWARDS

Entertainment Software Association (ESA) Computer & Video Game Scholarship (2015, 2016)
SWE Admiral Grace Murray Hopper Scholarship (2015)
SoCal National Center for Women & Informational Technology (NCWIT) Award for Aspirations in Computing (2015)

EXPERIENCE

NSF REU INTERNSHIP | Embedded Systems Lab

June 2016 – September 2016 | Riverside, CA

- Directed placer algorithm for microfluidic chip design automation that increased area utilization by 35%.
- Seam carving post-processing algorithm that increased area utilization by 33% and decreased route length by 15%.
- Straight path priority, component buffer enforcement, and port assignment optimizations for routing algorithm.
- Resulted in publication submitted to the Asia and South Pacific Design Automation Conference.

TECHNOLOGY INTERNSHIP | zyBooks

December 2016 – present | Riverside, CA

- Reviews and revisions of CS educational content for online publication.
- Alternative text translations in XML of interactive activities for the blind.
- Provide technical support services for instructors and students.

RESEARCH ASSISTANT | Embedded Systems Lab

January 2016 - present | Riverside, CA

- Four planar graph algorithms expanding point placement from Chrobak-Payne Straight Line Routing Algorithm to account for areas of components at the points. Increased area utilization by 23%.
- Corner post-processor that reduces corners on routes to diagonals. Reduced route length by 16%.

PROJECTS

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

Java | Android

- Pairs refugees to donors that can provide resources and a forum to communicate with available donors in response to the global refugee crisis.
- Android Studio and Butter Knife libraries used to bind views to the UI.

GRID ROUTING FRAMEWORK

C++ | Linux

- Implemented Lee's Routing Algorithm, a breadth first search, on a 2D grid.
- Turn reduction optimization to increase amount of straight routes.
- Multiple route handling feature with route overlap prevention.

AURORA | Hacktech Hackathon 2016

Java | Android

- Virtual reality based real estate application in which agents post listings with images that are then rendered for clients to experience a home tour using an Android device and a Google Cardboard viewer.
- Android Studio, Google Cardboard API used for virtual reality capability, Google Maps API used to capture property locations.