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
Software Construction
Advanced Discrete Structures

IN PROGRESS
Operating Systems
Software Engineering
Research Design Project

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.

GAME DEVELOPER | BRAIN GAME CENTER

September 2016 – present | Riverside, CA
- Created task set selection menu and end of level statistics display for auditory training game in C# using Unity Game Engine.

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.