Karen Kong

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Skills

C++, Java, Python, HTML, CSS, JavaScript

Git, Android Studio, SQL

Work Experience

Facebook University for Engineering Intern *Summer 2017*
Facebook *Menlo Park, CA*

- Developed Android app on a team for Facebook friends with opposing views to chat anonymously.
- Created push notifications and notification service to listen for new messages in the Firebase database.
- Configured REST Client to pull article names from the NY Times API into chat topic suggestions.
- Added multimedia and camera support to messages in front end and back end.

Research Assistant *Jan. 2016 - June 2017*
Embedded Systems Lab *Riverside, CA*

- Designed graph algorithms in C++ for microfluidic chip design automation.
- Constructed 4 algorithms that expand point placement from Chrobak-Payne Straight Line Routing to account for areas of components, increasing area utilization by 23%.
- Programmed post-processor that reduces corners on routes to diagonals, reducing route length by 16%. Published findings in ACM Journal paper.

Intern *Dec. 2016 - June 2017*
zyBooks *Riverside, CA*

- Reviewed and revised Computer Science educational content for interactive online textbooks.
- Generated alternative text in XML to improve interactive activity accessibility.

NSF REU *Summer 2016*
Embedded Systems Lab *Riverside, CA*

- Developed directed placement algorithm in C++, increasing area utilization by 24% and decreasing route length by 94%.
- Applied seam carving to post-processing, increasing area utilization by 33% and decreasing route length by 15%. Published findings in GLSVLSI paper.
- Implemented straight path priority, component buffer enforcement, and port assignment optimizations to increase network flow routing algorithm efficiency.

Projects

De-Classify *Java*
Software Engineering Course *Android*

- Students post, view, and rate anonymous feedback about their professors.
- Built frontend using Android Studio and the Butterknife, Iconify, and AdMod libraries.
- Transferred data to and from the back end using a Retrofit REST API Client and Eventbus library.

Parkbnb *Java*
1st Place at Cutie Hack 2017 *Android*

- Users list their unused garage and extra parking spaces and book the listings.
- Created map activity to display listing locations using Google Maps API.
- Designed listing booking activity to view and remove listing from the Firebase database.

Education

Computer Science B.S. *Expected June 2019*
University of California, Riverside *3.99 GPA*