

# Karen Kong

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## Skills

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

Git, Android Studio, SQL

## Work Experience

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### 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

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### 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

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Computer Science B.S.

Expected June 2019

UNIVERSITY OF CALIFORNIA, RIVERSIDE

3.99 GPA