

# Ruei-Bang Chen

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## Experience

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### LinkedIn

*Software Engineer, Systems Infrastructure*

Sunnyvale, CA

*Aug 2020 - Present*

- Supporting GraphQL routing involving loopback request, cross data-center call, and service discovery
- Building the next generation static asset serving using Azure Blob Storage and migrating the static content to it
- Enabled a new URL in Apache Traffic Server plugin that can use consistent hashing for a certain type of service
- Manipulated network headers in reverse proxy to pass information between clients and origin servers as needed

### The University of Texas at Austin

*Teaching Assistant, Department of Computer Science*

Austin, TX

*Sep. 2018 - May 2020*

- CS 378 Modern Web Applications (Fall 18 & 19), CS377P Programming for Performance (Spring 19 & 20)
- Held office hours, graded assignments and exams, answered questions on Piazza, discussed with the instructor

### LinkedIn

*Software Engineer Intern*

Sunnyvale, CA

*May 2019 - Aug. 2019*

- Developed an on-demand profiling web app for C++ applications that can visualize and render the profiling results (flame graphs) in the browser to optimize or debug C++ programs across the entire company
- Designed and implemented an automated profiling and alert system that checks CPU consumed by Apache Traffic Server, triggers the profiling and sends alert emails automatically when it goes beyond threshold

## Skills

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**Programming Languages:** C / C++, Python, Java, JavaScript, Kotlin, SQL (MySQL / PostgreSQL), MATLAB

**Tools and Technologies:** Git, Django, Flask, MongoDB, Spring, REStEasy, AWS EC2, TensorFlow, PyTorch, OpenMP

## Selected Projects

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### Explore UT

- Developed a website introducing landmarks near UT campus using Python with Flask and MongoDB
- Refactored the Web API backend and created an Android app frontend using Kotlin
- Implemented a cross-platform (Android / iOS) app frontend that imitates the Android app using React Native

### Parallel Principal Component Analysis Applied to Surveillance Video

- Parallelized singular value decomposition (SVD) by one-sided Jacobi method
- Exploited tall-and-skinny SVD to further accelerate the program and avoid unnecessary computations
- Reduced 54% of total execution time (including time for pre-processing and post-processing) using multi-threading

### Multiplayer Web Tank Game

- Detected collisions with Box2d physics engine and rendered the scene by HTML5 canvas and JQuery
- Featured a store to upgrade tanks, a real-time chatroom by Django Channels, and user account management
- Designed backend routing, database and deployed the web application on both Heroku and Amazon AWS EC2

## Education

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### The University of Texas at Austin (UT Austin)

*M.S. in Computer Science, GPA: 3.88/4.0*

Austin, TX

*Aug. 2018 - May 2020*

### National Chiao Tung University

*B.S. in Electrical and Computer Engineering, Minor in Computer Science, GPA: 4.11/4.3*

Hsinchu, Taiwan

*Sep. 2012 - Jun. 2016*

### Carnegie Mellon University

*Exchange Student in Electrical and Computer Engineering with scholarships, GPA: 3.73/4.0*

Pittsburgh, PA

*Jan. 2016 - May 2016*

## Honors and Awards

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**TAShip and Tuition Reduction Benefit, UT Austin**

Austin, TX

**Best Project Award in Web Application Development, Carnegie Mellon University**

Pittsburgh, PA

**Academic Achievement Award (top 5% in spring 2014), National Chiao Tung University**

Hsinchu, Taiwan