

Charlie Yuan Zhou

Computer Science

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SUMMARY

Looking for software engineering internship position. Interested in and experienced with web app development. Passionate about programming. Be able to accomplish full stack projects. Good at self-learning and problem solving.

EDUCATION

Cornell University

Computer Science Master of Engineering Program

Ithaca, NY

Sept 2017 –

University of Toronto

B.Sc. (a) Computer Science Specialist focus in Web and Internet Technologies
(b) Mathematics Minor

Toronto, ON

Sept 2014 – June 2017

GPA: 3.85/4.00. Specialist requirement & CS courses only: 3.90/4.00.

Honors: Admission Scholarship (\$5000); Dean's List 2014, 2015, 2016;
In-course Scholarship 2014-2015 (\$1250), 2015-2016 (\$1500)

PROJECTS (Highlighted)

Utop Tutor Website – Individual, emphasize on backend (utoptutor.com)

- Website for Utop Tutor. Built with LAMP stack in the first version. Users can sign up for tutoring service.
- Added an auto-tester for students to test their Python code. Able to detect some malicious submissions. The tester scored 3,000 submissions over a two-week period.
- Changed stack to Node.js, Express, MongoDB with backend rendering in 2017. Bootstrap is used in frontend.

Bilibili API Development – Personal, emphasize on backend

- Using public APIs offered by bilibili.com (a video website) to provide user a GUI to collect and analyze data.
- Developed with Node.js, Express, MySQL and backend rendering. Running on bili.utoptutor.com.
- As a side part, collected 14 million video information and studied some mechanism of how MySQL works.

Easy File Transfer – Group, frontend

- Users can send files to their online friends via P2P on this web app. Built with MEAN stack.
- Angular II was used. Implemented drag-and-drop feature under this framework.
- Designed an algorithm to display user's online friends on the web page (similar to AirDrop).

Simple Router – Group leader, software

- A program that functions as a router: receiving, routing and forwarding packets to its next hop in the network.
- Implemented features for the router to recognize ARP and IP packets (including TCP, UDP, and ICMP), decide where it should be sent to, modify their header, and finally send out the packets.
- Modified the functionalities so that the router supports NAT and TCP connection states.

SKILLS

Languages: Python (best), C (7 years), Java; worked with PHP, HTML/CSS, JavaScript, Swift, etc.

App Development: Node.js, Express, MongoDB for web app, Eclipse for Android app, and Xcode for iOS app.

Computer Architecture & System: Assembly; Linux shell, kernel programming; ext2 file system implementation.

Others: Database implementation; machine learning; computer networks.

EXPERIENCE

University of Toronto – Teaching Assistant for CSC165

January 2017 – April 2017

- CSC165: Mathematical Expression and Reasoning for Computer Science.
- Answering students' question. Inspecting and scoring assignments and term tests.

Utop Tutor – Developer and Tutor

Sept 2015 – January 2017

- Offered tutoring services on computer science and math courses.
- Developed its official website as described above. It is running it on my server and I bought the domain.