

# Chuo-Yun (Joey) Yang

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## 2019 Summer Software Development Engineer Internship

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### Education

**Georgia Institute of Technology** *Atlanta, GA*

Expected in Dec 2019

M.S. in Computer Science

- Courses: Big Data Systems, Database Systems, Computer Networks, Advanced Operating Systems

**National Chiao Tung University** *Hsinchu, Taiwan*

Jan. 2018

B.S. in Computer Science (GPA: 3.99/4.0)

- Awards: Academic Achievement Award (4 Semesters; students within top 5%)
- Courses: Data Structures, Algorithms, Cloud Computing, System Administration, Compiler Design

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### Professional Experience

**Back End Web Developer Intern** *NCTU, Hsinchu, Taiwan*

July 2017 – July 2018

Student Portal

- Built integrated study services for 1000 users in Department of Computer Science and deployed website with **Express.js**
- Automated the website to restart in isolated environment when any abnormal event occurs utilizing **Docker** and **PM2**
- Secured the website by implementing login system with **OAuth2.0** and configured reverse proxy with **Nginx**
- Created 50 **Restful APIs** including student graduation status, preferred course sequences, communication between users with authorization based on different user profiles
- Accelerated the website by more than 90% through compressing and serving static files with **Webpack** and **Nginx** and reducing size of bundle.js (generated by **Webpack**) by more than 80%

**Software Engineering Intern** *Accton Technology, Hsinchu, Taiwan*

July 2017 – Aug. 2017

Software Defined Network Controller Applications

- Built different network topologies with **MININET** and **Openflow** protocol to test **ONOS** applications
- Constructed **ONOS** application **vRouter** which utilizes **ONOS**, **Quagga**, and **Open vSwitch** to leverage Software Defined Network concept in network routing management

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### Selected Projects

**Dog Tracking Interactive Map** *Internet of Things, Web Development*

Aug. 2016 – July 2017

- Integrated dog trackers, PM2.5 sensors, and monitors in NCTU to campus map with **Google Map API** and **JavaScript**
- Predicted the location of dogs and combined 3 monitors in the campus to show real-time images of dogs by adopting **quadtrees** to analyze 250 geolocation records collected from dog trackers

**Private Cloud Storage Service** *Cloud Computing, Web Development*

Sept. 2017 – Jan. 2018

- Deployed Object Storage **Swift** in multi-node **OpenStack** environment
- Created 3 replicas of original object with the probability of losing any object of 1GB size per year  $\leq 10^{-11}$
- Built middleware of **Swift** with **Python** that can transform and adjust colors to images where user can select the desired effects on a web interface connected to **Swift APIs** by **Express.js**

**Hypervisor Profiling** *Cloud Computing, Multithreaded Programming*

Sept. 2017 – Jan. 2018

- Predicted potential runtime of a program which allows users to customize number of thread and CPU used written in **C**
- Analyzed CPU utilization differences between running multithreaded program on hypervisor and host OS

**XSL Transformations** *Compiler Design*

Sept. 2016 – Jan. 2017

- Transformed **XML** files into other format by **XSL** Transformation in three stages by **C++**: scanned the input data into tokens, parsed tokens to identify actions to perform, and translated **XML** by matching patterns of **XSL** Transformation

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### Skills

**Programming Languages:** C/C++, Java, Python, JavaScript, SQL, HTML, CSS

**Tools and Frameworks:** Git, Express.js, Webpack, Bash, Docker, Nginx, PM2

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### Volunteer Experience

Volunteered teaching math and science in Nepal (2012), Colombia (2014), and Taiwan (2015)