

CHING-HO LU

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Master student of Carnegie Mellon University with **two years of full-stack engineering** working experience.
Looking for 2020 new grad full time opportunity in the field of software development.

EDUCATION

Carnegie Mellon University – Information Network Institute Pittsburgh, PA
Master of Science in Information Technology – Mobility; GPA: 3.58 Expected Graduation: May 2020
- Key courses: Computer System, Distributed System, Web Application Development

National Chiao Tung University Hsinchu, Taiwan
Master of Electronics Engineering Sep. 2012 - Aug. 2014
- Key courses: Machine Learning, Computer Architecture; GPA: 4.07/4.3

National Chiao Tung University Hsinchu, Taiwan
Bachelor of Electronics Engineering Aug. 2008 - Jun. 2012
- Key courses: OOP, Data Structure, Algorithm, Embedded System; GPA: 3.5/4.3

SKILL

Programming: C/C++, Python, JAVA, Git, Qt, Linux/Embedded system, Assembly
Linux: Kernel, shell script, Tcl/Tk, server managing, apache, nginx, docker, kubernetes
Web development: Laravel, Django, Codeigniter, PHP, SQL, CSS, jQuery, Bootstrap, Vue.js, JavaScript

EXPERIENCE

Yahoo Sunnyvale, California
Software Engineer Intern May. 2019 - July. 2019
- Refactor API from RESTful to GraphQL on Jetty, reduce 80% of the API endpoints and deployed to production.
- Refactor framework for early error out and redesign the test for the new framework.
- Build AR news watching webpage using AR.js and Three.js.

Mediatek.Inc Hsinchu, Taiwan
Software Engineer Dec. 2014 - July. 2018
- Created in-house PM system with Django and successfully deployed to Taiwan, Singapore, and India sites.
- Implement **Cycle Detection on 20 M nodes** to fix Design Rule Violations, saving weeks of manual time.

Realtek Semiconductor Corp. Hsinchu, Taiwan
Software Intern Sep. 2013 - Sep. 2014
- Implemented cell-aware test pattern generator tool with C++, and integrated into industry flow.
- Designed Dual Cell Aware Testing framework, and won "**Best Paper Award**" in top conference of IEEE 2017.

PERSONAL STARTUPS

GOGOOUT CO., LTD Taipei, Taiwan
Full Stack Engineer, Co-founder Mar. 2017 – Mar. 2019
- Served as a **full stack developer** using **Laravel**, Bootstrap, **Vue.js** to build ERP system adopted by 200+ stores.
- Deploy the service with **Kubernetes** on Google cloud and use multi cluster ingress to manage geolocation base load balancing handling millions of page views.
- Reduced the search response time **from 65 ms to 20 ms** by redesigning the search algorithm, database structure, query caching (memcached), load balancer, and CDN, increased the conversion rate for 80%.

PROJECTS

Class Note: A slide sharing platform allowing users to simultaneously add or edit annotation onto the slide. This project use **HTML5** to render the complex annotations and markers, **Vue.js** as front-end framework, **Django** as backend framework, and **WebSocket** to sync the editing status.

Agamotto: An production line control system build by **Django** as server and control the client by tcl.

Layout Editor: A layout editing software build on **Qt/C++**, supporting industrial standard, "Gerber". Capable of rendering large scale graph containing over **10M nodes** in data structure. Sold to Fu-Hua Information Inc.

Proxy Server: A proxy server done by C from scratch. Capable of handling thousands of concurrent requests with threading and Reader-writer lock. Also reduced the network traffic with multi-media ready LRU caching.

Raft: Implemented the distributed consensus system on **JAVA** with Raft algorithm.

Malloc: Rewrite the default malloc/ calloc/ realloc functions using **Binary Search Tree** and segmentation list to manage the explicit free block list. Beating the default malloc performance by **25% throughput**.

Tiny Shell: A Linux shell build by C, handling all kinds of **Kernel signals**, frontend/ backend job control, zombie handling, and IO redirecting.