

I-Chun (Arthur) Liu

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Education

University of Southern California

MASTER OF SCIENCE, COMPUTER SCIENCE

Jan. 2021 - Dec. 2022 (expected)

Los Angeles, CA

University of California, Los Angeles

MASTER OF SCIENCE, COMPUTER SCIENCE

October 2014 - June 2016

Los Angeles, CA

University of Wisconsin-Madison

BACHELOR OF SCIENCE, COMPUTER SCIENCE

September 2010 - May 2014

Madison, WI

Experience

Academia Sinica (Institute of Information Science), Multimedia Technologies Laboratory

RESEARCH ASSISTANT. ADVISED BY PROF. HONG-YUAN MARK LIAO AND PROF. LI-FEN CHEN.

January 2019 - Present

Taipei, Taiwan

- Conducted research on computer vision in topics including object detection, instance segmentation, and loss functions.
- Proposed 3D Multi-Resolution R-CNN, the first end-to-end 3D instance segmentation framework for cerebral microbleeds using Susceptibility Weighted Imaging (manuscript under review).

Appier

SOFTWARE ENGINEER

October 2017 - April 2018

Taipei, Taiwan

- Reduced upload time by 25% using threads through building new endpoint for uploading creatives.
- Maintained and developed new features for dynamic creatives generator tool using React, Redux, JavaScript, and CSS.
- Designed and built dynamic creative templates with logo rotation, promotional banner rotation, customized fields that can parse any catalog field from data feed, and discount tags.
- Integrated Vibrant.js to dynamic creatives generator tool, allowing creatives' color scheme to automatically match uploaded company logos.
- Maintained and developed new pages and features for Appier.com.

Mozilla (Firefox DevTools Debugger)

OPEN SOURCE CONTRIBUTOR

November 2016 - November 2017

GitHub

- Made 35 contributions, from small UI fixes to significant features, to Firefox's new DevTools Debugger, which is written in React and Redux and has a goal of being first universal debugger for any platform.
- Added save tabs and save breakpoints, two features that let users persist Debugger state across sessions. The features required saving Debugger state to Local Storage as user navigated sources and added and removed breakpoints.
- Refactored how sources were referenced in Debugger, from a system that used Source IDs to one that used URLs, to ensure consistency over time.
- Helped add flow-type annotations to Debugger, which makes code more understandable to new contributors and adds confidence when approving pull requests.

National Development Council

FOREIGN LANGUAGE SPECIALIST — CONSCRIPT

August 2016 - August 2017

Taipei, Taiwan

- Translated social/cultural development policy documents from and into Chinese and English.

Publications

- "3D Instance Segmentation Framework for Cerebral Microbleeds using 3D Multi-Resolution R-CNN." **I-Chun Arthur Liu**, Chien-Yao Wang, Jiun-Wei Chen, Wei-Chi Li, Feng-Chi Chang, Yi-Chung Lee, Yi-Chu Liao, Chih-Ping Chung, Hong-Yuan Mark Liao, and Li-Fen Chen. *Under review.*

Skills

Languages Native: Mandarin Chinese. Fluent: English.

Programming Proficient in Python, PyTorch, LaTeX; prior experience with C/C++, JavaScript, Java.

Teaching Experience

Spring 2014 **Instructor**, After-School Computer Science Club (K-12)

Madison, WI

Side Projects

Place to Study

June 2016 - November 2016

INDEPENDENT PROJECT

Los Angeles, CA

- Designed website (Place to Study) for students to find locations to study around campus, which had three main features: search UI for discovering locations, CMS for adding and reviewing new locations, and ratings and review system.
- Developed Place to Study with responsive layout and Firebase backend so students could use application on the go and it would run on any device.
- Place to Study was success on campus and featured in *Daily Bruin* newspaper.

Master's Capstone Project (UCLA)

June 2015 - June 2016

INDEPENDENT PROJECT

Los Angeles, CA

- Designed a platform to connect businesses to their customers. The platform consisted of two applications: a web CMS for businesses to manage their store information and promotions, where updates to this information would alert their customers, and an iOS app for customers that provided easier access to their favorite stores.
- The iOS app had 2 main features: 1) a mechanism for users to share their favorite stores with other users by using locations and making/checking updates on relational database, and 2) a clean UI dedicated to displaying promotions where users could easily glance through each store's promotions.
- Visited local stores near UCLA, signed 87 of them up for the program, and created their store pages. I also obtained a sponsorship from ComNet, who supplied 150 of \$5 calling cards and 250 discount cards to students to help promote this platform.