

# I-Chun (Arthur) Liu

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## Education

### University of Southern California

MASTER OF SCIENCE, COMPUTER SCIENCE

Jan. 2021 - May 2023 (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

## Publications

[1] One paper is under review in RSS 2023.

[2] Gautam Salhotra\*, I-Chun Arthur Liu\*, Marcus Dominguez-Kuhne, and Gaurav S. Sukhatme. Learning Deformable Object Manipulation from Expert Demonstrations. In *IEEE Robotics and Automation Letters (RA-L)* and *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2022. [Website](#).

[3] I-Chun Arthur Liu\*, Shagun Uppal\*, Gaurav S. Sukhatme, Joseph J. Lim, Peter Englert, and Youngwoon Lee. Distilling Motion Planner Augmented Policies into Visual Control Policies for Robot Manipulation. In *Conference on Robot Learning (CoRL)*, 2021. [Website](#).

[4] 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. 3D Instance Segmentation Framework for Cerebral Microbleeds using 3D Multi-Resolution R-CNN. *Under review*.

\* indicates equal contribution.

## Research Experience

### Amazon Robotics

(INCOMING) APPLIED SCIENTIST INTERN

- Manipulation Technologies team.

May 2023 - August 2023

Westborough, MA, United States

### University of Southern California, Robotics Embedded Systems Laboratory (RESL)

RESEARCH ASSISTANT (PART-TIME, PAID POSITION). ADVISED BY PROF. GAURAV SUKHATME.

- My research interests are in deep reinforcement learning, vision, and sim-to-real transfer for robotics.
- Published two papers (CoRL 2021, RA-L + IROS 2022) as first author.

January 2021 - Present

Los Angeles, CA, United States

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

RESEARCH ASSISTANT (FULL-TIME, PAID POSITION). ADVISED BY PROF. HONG-YUAN MARK LIAO AND PROF. LI-FEN CHEN.

- 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 (Preprint).

January 2019 - December 2020

Taipei, Taiwan

## Service

**Reviewer** CoRL 2022

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

## Skills

**Languages** Native: Mandarin Chinese. Fluent: English.

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

## Work Experience

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### Appier

October 2017 - April 2018

SOFTWARE ENGINEER, FRONTEND

Taipei, Taiwan

- 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.

### Mozilla (Firefox DevTools Debugger)

November 2016 - November 2017

OPEN SOURCE CONTRIBUTOR

GitHub

- Made 35 contributions, from small UI fixes to significant features, to Firefox's new DevTools Debugger, which is written in React and Redux.
- 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.

### National Development Council

August 2016 - August 2017

FOREIGN LANGUAGE SPECIALIST — CONSCRIPT

Taipei, Taiwan

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

## Side Projects

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### 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.

### 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.

## Achievements

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**Graduated with Distinction**, University of Wisconsin-Madison (cumulative GPA in the top 20% of my graduating class).

**PlacetoStudy Featured in The Daily Bruin Newspaper**, A website that helped students find good locations for studying around campus.