

Ting-Han (Timmy) Lin

PhD Student at UChicago CS

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EDUCATION

University of Chicago

PhD in Computer Science

Advisor: Prof. Sarah Sebo, Human-Robot Interaction Lab

Chicago, IL

Sep 2023 – Jun 2028

University of Chicago

MS in Computer Science & BA in Economics (4-year Joint BA/MS in Computer Science)

GPA: (3.77/4.00), Honors: Dean's List (2018-2019, 2021-2022), Bridge Builder Award (2021)

Chicago, IL

Sep 2018 – Jun 2022

Taipei Wego Senior High School

High School Diploma

GPA: (4.18/4.30), Honors: Valedictorian (2018), High Honor Roll (2015-2018)

Taipei, Taiwan

Sep 2015 – Jun 2018

FULL PAPER PUBLICATIONS

ThrowIO: Actuated TUIs that Facilitate “Throwing and Catching” Spatial Interaction with Overhanging Mobile Wheeled Robots

Ting-Han Lin, Willa Yunqi Yang, Ken Nakagaki

In Proc. ACM CHI 2023. Hamburg, Germany. Acceptance rate: 27.6%

Ice-Breaking Technology: Robots and Computers Can Foster Meaningful Connections between Strangers through In-Person Conversations

Alex Wuqi Zhang, Ting-Han Lin, Xuan Zhao, Sarah Sebo

In Proc. ACM CHI 2023. Hamburg, Germany. Acceptance rate: 27.6%

Benefits of an Interactive Robot Character in Immersive Puzzle Games

Ting-Han Lin, Spencer Ng*, Sarah Sebo (*equal contribution)*

In Proc. IEEE RO-MAN 2022. Naples, Italy. Acceptance rate: 62%

DEMO

Joint Demonstration of ThrowIO and AeroRigUI

ThrowIO: *Ting-Han Lin, Willa Yang, Ken Nakagaki*

AeroRigUI: *Lilith Yu*, Chenfeng Gao*, David Wu, Ken Nakagaki (*equal contribution)*

In Proc. ACM CHI 2023 Interactivity Demo. Hamburg, Germany.

RESEARCH EXPERIENCE

UChicago Department of Computer Science

Research Assistant at Actuated Experience Lab (AxLab) Advised by Prof. Ken Nakagaki

Chicago, IL

Jan 2022 – Aug 2023

- Used Processing IDE to program Sony toio robots, perform color and IR object detection, run physics simulation, and implement projection mapping for research purposes
- Led Unity 3D activities for creative coding on topics such as designing underwater VR/AR user interfaces
- Honed electronic techniques in building Arduino and soldering wires, and practiced fabrication skills in designing 3D-printed objects with Fusion 360 and cutting different materials with waterjet and laser cutters

UChicago Department of Computer Science

Chicago, IL

Research Assistant at Human-Robot Interaction (HRI) Lab Advised by Prof. Sarah Sebo

Sep 2020 – Aug 2023

- Programmed Nao robot, TurtleBot, Anki Vector robot, and Misty robot for research purposes
- Designed Qualtrics surveys and conducted user studies on campus, at UChicago Mindworks, and on Prolific
- Performed data analysis in R using linear mixed-effects models to analyze participant's data and using ANOVA tests to analyze group data

WORK EXPERIENCE

Upfront Healthcare Services

Chicago, IL

Data Science Fellow

Jun 2021 – Feb 2022

- Iteratively prototyped, developed, and automated data insights pipelines for anomaly detection through Microsoft Azure Synapse Analytics and Apache Spark Databricks
- Organized and structured large amounts of data into compelling reports and dashboards using SQL and Tableau
- Prototyped algorithms to promote interactive use cases including intelligent outreach and dynamic personalization

Actelligent Capital

Hong Kong

Data Scientist Intern

Jun 2020 – Sep 2020

- Extracted 20+ years of raw financial data from 100K+ companies to calculate the financial metrics in each factor of the Fama and French model using SQL and Python
- Identified and prioritized the most relevant metrics across 1000+ industries and sectors using XGBoost and Machine Learning models to ultimately predict stock price performance and risks
- Presented optimization recommendations to minimize the calculation time for financial metrics via Cython

Shanghai Commercial & Savings Bank (SCSB)

Taipei, Taiwan

Financial Services Intern

Jun 2019 – Aug 2019

- Analyzed and improved the marketing strategy of SCSB's credit card to increase its reach, engagement, and sales through Google Analytics and AdWords
- Researched on the performance of startups on OurCrowd (a SCSB-sponsored startup investing platform) to assist the investment team with adjusting the investment plans
- Extracted data from the database to analyze target audience's engagement with the online bank by Python

TEACHING & MENTORING

Teaching Assistant

DATA 21200: Mathematical Methods for Data Science II by Prof. David Biron, UChicago

Spring 2023

MPCS 51230: User Interface and User Experience Design by Prof. André Marques, UChicago

Winter 2023

DATA 21100: Mathematical Methods for Data Science I by Prof. David Biron, UChicago

Winter 2023

CMSC 20300: Introduction to Human Computer Interaction by Prof. Ken Nakagaki, UChicago

Fall 2022

DATA 21200: Mathematical Methods for Data Science II by Prof. David Biron, UChicago

Spring 2022

CMSC 11800: Introduction to Data Science I by Prof. Will Trimble, UChicago

Winter 2022

Grader

CMSC 11800: Intro to Data Science I by Prof. Michael Franklin and Prof. Dan Nicolae, UChicago

Fall 2021

CMSC 11900: Intro to Data Science II by Prof. Michael Franklin and Prof. Dan Nicolae, UChicago

Winter 2021

CMSC 11800: Intro to Data Science I by Prof. Michael Franklin and Prof. Dan Nicolae, UChicago

Fall 2020

UChicago Peer Mentor & Peer Mentor Advisory Board

- Led trainings for 100+ UChicago Peer Mentors and informed them of their responsibilities
- Provided direct support and direction to the incoming first-years and transfer students by responding to their questions, as they complete various tasks related to their transition to the College and the University of Chicago

SKILLS

Languages: Proficient in Mandarin and Taiwanese, Entry Level in Spanish**Programming:** Python, MATLAB, R, Java, SQL, Golang, C, JavaScript, HTML/CSS, STATA, C#, OpenCV, Docker, Git**Certifications:** Oracle Certified Associate Java Programmer, Microsoft Office Specialist 2010 Master, Adobe Certified Associate, Google Analytics and AdWords Certification, Certificate of Advanced Negotiation**VOLUNTEERING**

FIRST LEGO League Robotics Tournament

Chicago, IL

Robot Design Judge & Table Referee

Oct 2021 – Dec 2022

- Judged students' robot performance and design in terms of how well their innovative designs and code solutions match their mission strategies and how well they repeatedly test their robot and explain their robot design process

Be The Match (National Marrow Donor Program)

Chicago, IL

Volunteer

Sep 2019 – Jun 2022

- Organized annual in-person donor registration events at UChicago student center and invited friends, family, and colleagues to join the registry to become life-saving blood stem cell donors

UChicago Admissions Office

Taipei, Taiwan

Information Session Speaker

Sep 2021

- Invited back to Taipei Wego High School to give a talk about UChicago College on behalf of UChicago Admissions Office

EXTRACURRICULARS

UChicago Juggling Club

Chicago, IL

President

May 2019 – Jun 2022

- Directed multiple juggling performances on campus, which one of them was selected to be the finalists in 2019 UChicago Got Talent Show
- Led weekly juggling training sessions to help students learn how to juggle pins and balls

UChicago Taiwanese American Student Association (TASA)

Chicago, IL

Vice President

Oct 2018 – Jun 2022

- Hosted Taiwanese cultural festivals and organized speaker's events to promote Taiwanese culture on campus
- Cooperated with Intercollegiate Taiwanese American Students Association to offer students with opportunities for networking, leadership training, and identity-building

UChicago Intercollegiate Financial Journal Chicago (IFJ)

Chicago, IL

Senior Journal Writer

Oct 2018 – Jun 2020

- Published articles about new discovery of Artificial Intelligence to educate the undergraduate community
- Presented pitch ideas and shared writing guidance to help junior writers compose journals in weekly seminar

SELECTED PRESS

UChicago CS News. [“New Prototypes AeroRigUI and ThrowIO Take Spatial Interaction to New Heights – Literally”](#) April 18th, 2023

UChicago CS News. [“UChicago Research Tests Whether Robots or Humans Are Better Game Partners”](#) October 18th, 2022