

# Ting-Han (Timmy) Lin

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## EDUCATION

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### The University of Chicago

Chicago, IL

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

Sep 2018 – Jun 2022

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

Metcalf Scholarship Award (2019-2021)

### Taipei Wego Senior High School

Taipei, Taiwan

*High School Diploma*

Sep 2015 – Jun 2018

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

Honor Scholarship Prize (2015-2018)

## FULL PAPER PUBLICATIONS

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### Benefits of an Interactive Robot Character in Immersive Puzzle Games

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

In Proceedings of the 31st IEEE International Conference on Robot & Human Interactive Communication (RO-MAN 2022). Naples, Italy, August 29 - September 2.

[Video Link](#) & [Paper Link](#)

## RESEARCH EXPERIENCE

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### UChicago Department of Computer Science

Chicago, IL

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

Jan 2022 – Present

- Use Processing to program Sony toio robots, and perform object detection, physics simulation, and projection mapping for research purposes
- Lead Unity 3D activities for creative coding on topics such as designing underwater VR/AR user interfaces
- Hone electronic techniques in building Arduino and soldering wires, and practice 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 – Present

- Program Nao robot, TurtleBot, and Anki Vector robot for research purposes
- Design Qualtrics surveys and conduct user studies on campus, at UChicago Mindworks, and on Prolific
- Perform data analysis in R using linear mixed-effects models to analyze participant's data in a group and using ANOVA tests to analyze group data

## WORK EXPERIENCE

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### 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**

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### **Teaching Assistant**

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**

MPCS 51230: User Interface and User Experience Design by Prof. André Marques, UChicago	Winter 2023
CMSC 11800: Introduction to Data Science I by Prof. Michael Franklin and Dan Nicolae, UChicago	Fall 2021
CMSC 11900: Introduction to Data Science II by Prof. Michael Franklin and Dan Nicolae, UChicago	Winter 2021
CMSC 11800: Introduction to Data Science I by Prof. Michael Franklin and Dan Nicolae, UChicago	Fall 2020

### **UChicago Peer Mentor & Peer Mentor Advisory Board**

Spring 2019 – Fall 2021

- 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**

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**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

- Judge 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 the 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 balls and pins

### **UChicago Taiwanese American Student Association (TASA)**

Chicago, IL

*Vice President*

Oct 2018 – Jun 2022

- Hosted Taiwanese cultural festivals and organize 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