

Hanson Lu

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EDUCATION

The University of Chicago, Chicago, IL

Bachelor of Sciences, expected June 2020; Majoring in Computer Science and Linguistics, GPA: 3.98/4.00

Wuhan Foreign Languages School (WFLS), Wuhan, Hubei, China

International Baccalaureate Diploma, 2016; IB Final Score 44/45, GPA: 3.91/4.00

Honors: University of Chicago Dean's List 2016-2017, 2017-2018;

Metcalf Internship Recipient, 2017; Liew Family College Research Fellow, 2018.

RESEARCH EXPERIENCE

Research Assistant, Department of Computer Science, University of Chicago

Aug 2018 – Present

- Work with Prof. Yanjing Li on detecting and improving resilience to hardware errors in neural networks
- Research and survey literature on existing methods to brainstorm possible improvements and innovations
- Implement, train and evaluate error-resilient neural network models including AlexNet using TensorFlow
- Awarded Liew Family College Research Grant for undergraduates for this research project

Research Assistant, Linguistica Project, University of Chicago

Jun 2018 – Present

- Collaborate on developing Linguistica, an unsupervised morphological analysis software, with Prof. John Goldsmith
- Program new functionalities in C++ for Linguistica such as file save/load and GUI components on the Qt 5.11 platform
- Plan, discuss and design additional future models utilizing Finite State Automata
- Research, discuss and implement algorithms for compound word discovery and performance evaluation

Research Assistant, Multilingualism and Decision-Making Lab, University of Chicago

Mar 2017 – Mar 2018

- Administered and managed psychological study in the University of Chicago Beijing Center during summer Metcalf internship
- Recruited and conducted experiments on 413 subjects for this study and analyzed data using R
- Coordinated on-campus psychological study on effect of multilingualism on short-term memory

Research Assistant, Department of Public Health, University of Hawai'i at Manoa, Honolulu, Hawai'i

Jul – Aug 2015

- Translated academic articles written by graduate students from Chinese to English, including *A Review on Predicting Ground PM2.5 Concentration Using Satellite Aerosol Optical Depth*, published in *Atmosphere* 2016, 7, 129.

ACTIVITIES AND LEADERSHIP

Programmer, Hack4Impact, University of Chicago chapter

Apr 2018 – Present

- Develop a website for the Transgender Law Center that helps transgender individuals navigate legal documents and procedures
- Design and implement back-end data structures and login system using Go and SQLite

College Core Tutor, College Core Tutor Program, University of Chicago

Jan 2018 – Present

- Tutor for intro-level chemistry (Winter '18) and computer science (Autumn '18 – Winter '19) courses
- Lead weekly 4-hour problem sessions in small groups of 5 to 10: answer questions, explain concepts and algorithms

Flutist, Middle Eastern Music Ensemble, University of Chicago

Jan 2017 – Dec 2018

- Attended weekly rehearsals and gatherings
- Performed in music concerts at end of each quarter, repertoire includes Turkish, Persian and Arabic music

Volunteer, MEDLIFE, University of Chicago Chapter

Sept 2016 – Mar 2017

- Engaged in biweekly discussions on global health issues, attended training sessions for mobile clinic trip
- Built mobile clinics and provided health services to 3 villages in Cusco, Peru during spring break trip

SKILLS

- Proficient in C, C++, MATLAB, Python (including TensorFlow and NumPy), R, HTML, CSS, Go and SQL.
- Familiar with Linux systems, proficient in Git and Subversion.
- Fluent in Mandarin Chinese, conversant in Japanese, elementary Spanish