

Yuwen Lu

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RESEARCH INTERESTS

Human-Computer Interaction (HCI), Human-AI Collaboration, User Experience (UX), Algorithmic Decision-Making, AI and Labor Economy, Creativity-Support Tools

EDUCATION

University of Notre Dame

Ph.D. Student, Computer Science and Engineering

Department of Computer Science and Engineering, College of Engineering

Advisor: Toby Jia-Jun Li

Notre Dame, IN

Aug 2021 – Present

Carnegie Mellon University

Master's, Human-Computer Interaction (MHCI)

Human-Computer Interaction Institute, School of Computer Science

Capstone: Redesign of *ApplyGrad*, the graduate application portal for the School of Computer Science ([website](#))

Advisors: Geoff Kaufman, Motahhare Eslami, Nikolas Martelaro

Pittsburgh, PA

Aug 2020 – Aug 2021

University of California, Irvine

Undergraduate Study Abroad

Department of Informatics, Donald Bren School of Information & Computer Sciences

Advisors: Gloria Mark, Alex Williams

Irvine, CA

Jan 2020 – Aug 2020

Technical University of Munich

Undergraduate Study Abroad

Department of Informatics

Capston (Praktikum): Design & development of a goalkeeper trainer iOS app, in collaboration with Oliver Kahn's *Goalplay*

Advisors: Juan Haladjian, Bernd Brügge

Munich, Germany

Apr 2019 – Aug 2019

Dalian University of Technology

B.Eng in Software Engineering

School of Software

Dalian, China

Sep. 2016 – June 2020

PUBLICATIONS

[1] Bridging the Gap Between UX Practitioners' Work Practices and AI-Enabled Design Support Tools

Yuwen Lu, Chengzhi Zhang, Iris Zhang, and Toby Jia-Jun Li

Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22)

[2] Computational Approaches for Understanding, Generating, and Adapting User Interfaces

Yue Jiang*, Yuwen Lu*, Jeffrey Nichols, Wolfgang Stuerzlinger, Chun Yu, Christof Lutteroth, Yang Li, Ranjitha Kumar, Toby Jia-Jun Li (* equal contribution)

Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22)

[3] **Characterizing Work-Life for Information Work on Mars: A Design Fiction for the New Future of Work on Earth**

Rhema Linder, Chase Hunter, Jacob McLemore, Senjuti Dutta, Fatema Akbar, Ted Grover, Thomas Breideband, Judith W Borghouts, **Yuwen Lu**, Gloria Mark, Austin Z Henley, Alex C Williams

Proceedings of the ACM on Human-Computer Interaction 6 (GROUP) 2022

[4] **The Social Amplification and Attenuation of COVID-19 Risk Perception Shaping Mask Wearing Behavior: A Longitudinal Twitter Analysis**

Suellen Hopfer, Emilia J Fields, **Yuwen Lu**, Ganesh Ramakrishnan, Ted Grover, Quishi Bai, Yicong Huang, Chen Li, Gloria Mark

PloS ONE, 2021

AWARDS & HONORS

Graduate School Professional Development Awards (GSPDA), <i>University of Notre Dame</i>	2022
Conference Presentation Grant, <i>University of Notre Dame</i>	2022
Gold Medal, International Genetically Engineered Machine (iGEM) 2019, originated at MIT	2019
Outstanding Delegate & Best Position Paper, National Model United Nations (NMUN) in New York	2019
Third Prize, IBM-ICBC National Fintech Innovation Hackathon	2018
Academic Excellence Scholarship, <i>Dalian University of Technology</i>	2017
Tech Innovation Scholarship, <i>Dalian University of Technology</i>	2017
National Scholarship (top scholarship for undergraduate students in China)	2017

RESEARCH EXPERIENCE

Building AI-Enabled Design Support Tools for UX Practitioners	Aug 2021 – Present
<i>Lead Researcher</i>	<i>Notre Dame, IN</i>
<ul style="list-style-type: none">• Focusing on using state-of-the-art machine learning models to support UX practitioners' work, in a team of 4• Co-organizing a CHI 2022 workshop with around 50 participants on <i>computational methods for user interfaces</i>• Conducted 8 one-hour interviews with UX practitioners to identify their needs with AI-enabled design support tools• Published a CHI Late-Breaking Work paper, to be presented at CHI 2022 (paper [1])	
Bridging AI Inequality in Digitally-Mediated Gig Work	Aug 2021 – Present
<i>Lead Researcher</i>	<i>Notre Dame, IN</i>
<ul style="list-style-type: none">• Collecting, analyzing data collected from gig workers to discover inequality in Digitally-Mediated Gig Work• Building AI-Enabled intelligent assistants that are owned and programmed by gig workers to support their work• Leading a team of 3 students to develop an app, CREPE, that enables data collection from research participants' phones• Working with community partners, e.g. <i>Chicago Gig Alliance</i>, to understand gig workers' unique challenges and needs• Presented two posters, for the proposed systems CREPE and SAUSAGE, at the Lucy Symposium in 2021	
Modernizing the UX of CMU Graduate Application System <i>ApplyGrad</i>	Jan 2021 – Aug 2021
<i>Technical Lead</i>	<i>Pittsburgh, PA</i>
<ul style="list-style-type: none">• Worked on improving the UX of the ApplyGrad application review system for CMU School of Computer Science• Conducted research with application reviewers using contextual inquiry, expert interviews, affinity diagramming, etc.	

- Investigated reviewers' concerns and potential fairness issues of integrating AI into the application review process
- Created Figma prototypes of the envisioned review experience for graduate application reviewers

Qualitative Analysis of COVID-19 Mask Perception Twitter Discussions

Jan 2021 – Aug 2021

Researcher

Irvine, CA

- Conducted 3 rounds of qualitative coding on 7,024 mask tweets in 2020 to analyze people's risk perception
- Contributed to our codebook with 6 themes uncovering how mask tweets amplified and attenuated COVID-19 risk
- Created descriptive statistics and visualizations for our Tweet dataset and coding results using Python and Pandas

COMMUNITY LEADERSHIP & SERVICE

Mentor

Feb 2022 - Present

Graduate Guidance Mentorship Program

Notre Dame, IN

- Meeting weekly with undergraduate mentees Meng Chen (Computer Science) and Allie Wu (Neuroscience)
- Providing tips, suggestions, and resources on academic research and graduate school application

Conference Reviewer

Jan 2022

The 25th ACM Conference On Computer- Supported Cooperative Work And Social Computing (CSCW)

Online Remote

Workshop Reviewer

Feb 2022

Computational Approaches for Understanding, Generating, and Adapting User Interfaces at CHI 2022

New Orleans, LA

Student Volunteer

Mar 2022

27th Annual Conference on Intelligent User Interfaces (IUI)

Online Remote

Student Volunteer

Oct 2021

The ACM Symposium on User Interface Software and Technology (UIST)

Online Remote

President

July 2018 – Jan 2019

IBM Student Club, Dalian University of Technology

Dalian, China

- Organized a series of tech salons, inviting IBM professionals to teach design thinking and latest tech advancements
- Arranged a hackathon for college students to use IBM Watson to build real-world applications
- Helped club members participate in regional and national technological competitions organized by IBM
- Coordinated company visits to IBM Dalian for club member students
- Received **Best Student Club Award** in 2018 from IBM China, as the only recipient in the nation

President

July 2017 – June 2018

Model United Nations (MUN) Association, Dalian University of Technology EDA Campus

Dalian, China

- Organized a regional MUN conference, *Dalian Yangfan MUN*, with over 100 participants from 5 local universities
- Hosted weekly training sessions to improve association members' public speaking, document writing, and research skills
- Coordinated delegations of association members to attend regional, national, and international MUN conferences

TEACHING EXPERIENCE

Teaching Assistant

CSE 44424 Human Computer Interaction (remote, London Campus)

Spring 2022

University of Notre Dame

Teaching Assistant

CSE 40655 Technical Concepts of Visual Effects

Spring 2022

University of Notre Dame

Teaching Assistant

CSE 30331/CSE 34331 Data Structures

Fall 2021

University of Notre Dame