

# Yuwen Lu

PhD Student, University of Notre Dame (4th Year)

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## RESEARCH INTERESTS

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Human-Centered AI, Human-Computer Interaction (HCI), Design and Development Support

## EDUCATION

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### University of Notre Dame

Notre Dame, IN

*Ph.D. student, Computer Science and Engineering*

*Aug 2021 – May 2025 (expected)*

Research Focus: Interaction techniques with AI, AI support for UI/UX prototyping, Dark patterns

Advisor: Dr. Toby Jia-Jun Li

### Carnegie Mellon University

Pittsburgh, PA

*Master's, Human-Computer Interaction (MHCI)*

*Aug 2020 – Aug 2021*

Human-Computer Interaction Institute, School of Computer Science

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

Collaborated with Dr. Nikolas Martelaro on AI for design support research projects

### Dalian University of Technology

Dalian, China

*B.Eng in Software Engineering*

*Sep 2016 – June 2020*

Study abroad: University of California, Irvine (advisors: Dr. Gloria Mark, Dr. Alex Williams), Technical University of Munich (advisors: Dr. Juan Haladjian, Dr. Bernd Brügge)

## WORK EXPERIENCE

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### Midjourney

San Francisco, CA

*Visiting Researcher, The Storytelling Lab*

*May – Sep 2025*

Building an iOS APP that turns personal journals into fictional stories, for deeper reflections

Mentors: John Joon Young Chung, Max Kreminski

### Apple

Seattle, WA

*AI/ML Intern, UI Understanding, Human-Centered Machine Intelligence*

*May – Sep 2024*

Led research project MISTY: UI Prototyping Through Interactive Conceptual Blending, paper published at CHI 2025

Mentors: Titus Barik, Alan Leung, Amanda Swearngin, Jeffrey Nichols

### Google

Cambridge, MA

*Student Researcher, Google Material Design*

*July – Dec 2023*

Explored AI integration in designer tools, with a focus on design systems and large language models (LLMs)

Case Study paper accepted to CHI 2024 [4]

Mentors: Tiffany Knearem, Clara Kliman-Silver, Frank Bentley

## SELECTED PUBLICATIONS

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- [1] **Misty: UI Prototyping Through Interactive Conceptual Blending**  
**Yuwen Lu**, Alan Leung, Amanda Swearngin, Jeffrey Nichols, Titus Barik  
*CHI 2025*
- [2] **From Design Transparency to Malleable Interfaces: Exploring End-User Personalization for Website Design Dark Patterns**  
**Yuwen Lu\***, Chao Zhang\*, Yuewen Yang, Yaxing Yao, Toby Jia-Jun Li (\* equal contribution)  
*CSCW 2024, **Best Paper Award** (Top 1%)*
- [3] **Flowy: Supporting UX Design Decisions Through AI-Driven Pattern Annotation in User Flows**  
**Yuwen Lu**, Ziang Tong, Qinyi Zhao, Yewon Oh, Bryan Wang, Toby Jia-Jun Li  
*In Submission*
- [4] **AI Is Not Enough: A Hybrid Technical Approach to AI Adoption in UI Linting With Heuristics**  
**Yuwen Lu**, Tiffany Kneareem, Shona Dutta, Jamie Blass, Clara Kliman-Silver, Frank Bentley  
*CHI Case Studies, 2024*
- [5] **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  
*CHI Late Breaking Work 2022*
- [6] **Designing and Developing User Interfaces with AI: Advancing Tools, Workflows, and Practices**  
**Yuwen Lu\***, Yue Jiang\*, Tiffany Kneareem, Clara Kliman-Silver, Christof Lutteroth, Jeffrey Nichols, Wolfgang Stuerzlinger (\* equal contribution)  
*CHI 2025 Workshop Proposal (the same workshop theme continued in 2022, 2023, 2024)*

## RESEARCH EXPERIENCE

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### **AI Support For Creative, Open-Ended UI/UX Design Workflows**

*Lead Researcher, team of 6*

*Notre Dame, IN*

- Investigating the human-AI co-creation with generative models in the context of user experience (UX) design
- Created a prototype web app, Flowy, to facilitate design pattern understanding in UX ideation (paper [3])
- Built a pipeline using GPT-4V for conditional UI layout generation and completion, accepted to ICML 2023 workshop
- Published a Late-Breaking Work paper on needfinding of AI design support tools, presented at CHI 2022 (paper [5])
- Co-organized three annual CHI workshops on *computational methods for user interfaces* (paper [6])

### **End-User Empowerment Against Design Dark Patterns Through Malleable Interfaces**

May 2022 – Present

*Lead Researcher, team of 5*

*Notre Dame, IN*

- Designed a technology probe that supports end users in changing design dark patterns on website interfaces with Figma
- Implemented the probe in the form of a browser extension using Vue.js, Tailwind CSS, and Google Firebase
- Organized 5 in-person co-design workshops to understand users' needs and expectations for dark pattern intervention
- Conducted a 2-week probe deployment study with 15 users to understand real-life, in-situ reaction to our approach
- Paper accepted to CSCW 2024 (paper [2]), receiving a **Best Paper award** (top 1%)

AWARDS & HONORS

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Third Place, Notre Dame-IBM Tech Ethics Hackathon, <i>University of Notre Dame &amp; IBM</i>	2024
<u>Lucy Scholars Fellowship</u> , <i>Lucy Family Insititute for Data &amp; Society, University of Notre Dame</i>	2022–2024
Graduate School Professional Development Awards (GSPDA), <i>University of Notre Dame</i>	2022
Conference Presentation Grant, <i>University of Notre Dame</i>	2022
Academic Excellence Scholarship & Tech Innovation Scholarship, <i>Dalian University of Technology</i>	2017
National Scholarship (top merit-based scholarship for undergraduate students in China)	2017

COMMUNITY LEADERSHIP & SERVICE

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<b>Workshop Organizer &amp; Reviewer</b>	2022, 2023 & 2024
<i>Computational Approaches for Understanding, Generating, and Adapting User Interfaces at CHI 2022–2024</i>	
<b>Conference Reviewer</b>	
<i>CHI, CSCW, MobileHCI, UIST, DIS, SIGGRAPH, CUI, IUI, ACM Journal on Responsible Computing</i>	
<b>Student Volunteer</b>	
<i>UIST 2021 &amp; 2023, IUI 2022</i>	
<b>Graduate Student Mentor</b>	Spring 2022
<i>Graduate Guidance Mentorship Program, for undergraduate students interested in academic research</i>	<i>Notre Dame, IN</i>