# **CHRISTINE LEE**

PhD Student CURRICULUM VITAE – SEPTEMBER 2024 University of Wisconsin-Madison, Department of Computer Sciences 1210 West Dayton Street, Madison, WI 53705-1685 USA

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# **RESEARCH MISSION**

To design, develop, and deploy AI tools that preserve user control, emulate human behavior, and support reliance through transparency to facilitate **resilient** AI systems that adapt to user needs, recover from setbacks, and continuously operate effectively for end-users in everyday AI applications.

# EDUCATION

#### Ph.D. in Computer Sciences, Fall 2022 - Present

University of Wisconsin-Madison (UW-Madison), Department of Computer Sciences, Madison, WI, USA *Advisor*: Dr. Bilge Mutlu

### Master of Science in Computer Sciences, Fall 2020 – Spring 2022

University of Wisconsin-Madison (UW-Madison), Madison, WI, USA *Advisor*: Dr. Bilge Mutlu

# Bachelor of Science in Computer Sciences, Summa Cum Laude, 2015-2019

Sejong University, Department of Computer Sciences, Seoul, South Korea

# HONORS & AWARDS

2024

- 1. **Doctoral Consortium Attendee**, ACM/SIGCHI Human Factors in Computing (CHI 2024) Lee. C., *Design, Development, and Deployment of Context-Adaptive AI Systems for Enhanced End-User Adoption*
- 2. **Doctoral Consortium Award**, ACM/SIGCHI Human Factors in Computing (CHI 2024) Awarded \$1700

2022

3. **Honorable Mention** (Top 131 in 2597) ACM/SIGCHI Human Factors in Computing (CHI 2022) Lee, C.; Cagiltay, B.; Mutlu, B. *The Unboxing Experience: Exploration and Design of Initial Interactions Between Children and Social Robots* 

2021

4. **Summer Research Assistant Award**, UW-Madison Computer Sciences Department Chosen as one of 15 students in the Computer Science department based on faculty nomination

2020

#### 5. Pitt Challenge Hackathon Award

Awarded 3rd place during Hackathon hosted by the University of Pittsburgh

2015 - 2019

6. **Dean's List with Distinction**, Spring 2016 – Fall 2019, Sejong University

#### 7. Sejong Global Excellence Scholarship, 2018 Fall

Awarded for academic excellence during study abroad exchange program

### PUBLICATIONS

\*Indicates equal contribution

### REFERRED FULL CONFERENCE PAPERS

2025

- 1. Lee, C., Porfirio, D., Wang, X., Zhao, K. & Mutlu, B. (2025). VeriPlan: Integrating Formal Verification and LLMs into End-User Planning. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (CHI'25).
- Kim, C., Sato, A., White, N., Ho, H., Lee, C., Hwang, Y. & Mutlu, B. (2025). Bridging Generations using Al-Supported Co-Creative Activities. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (CHI'25).

2024

- 3. **Lee, C.**, Lee, M.K.\*, & Mutlu, B.\* (2024). The AI-DEC: A Card-based Design Method for User-centered AI Explanations. In *Proceedings of the 2024 ACM Conference on Designing Interactive Systems* (DIS'24).
- 4. **Lee, C.**, Praveena, P., & Mutlu, B. (2024). REX: Designing User-centered Repair and Explanations to Address Robot Failures. In *Proceedings of the 2024 ACM Conference on Designing Interactive Systems* (DIS'24).
- Kim, C.\*, Lee, C.\*, & Mutlu, B. (2024). Understanding Large-Language Model (LLM)-powered Human-Robot Interaction. In *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction* (HRI'24).

2022

 Lee, C., Cagiltay, B., & Mutlu, B. (2022). The Unboxing Experience: Exploration and Design of Initial Interactions Between Children and Social Robots. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (CHI'22). Honorable Mention (Top 131 in 2597)

#### 2020

7. Kim, H.K., Choi, S.W., Bae, Y.S., Choi, J., Kwon, H., **Lee, C.**, Lee, H.-Y., Ko, T. (2020). MARIE: A Context-Aware Term Mapping with String Matching and Embedding Vectors. In *Proceedings of the Appl. Sci. 2020, 10, 7831*.

2019

8. Nam, J., **Lee, C.**, Patankar, A.A., Wang, H., Li, Y., and Moon, H. (2019). Object Classification for Domestic Waste based on Convolutional Neural Networks. In *Proceedings of the Korean Institute of Broadcast and Media Engineers Fall Conference*.

2018

 Jung, J.Y., Lee, C., Kim, J.H., Kim, S.I., Kim, J.I., Kong, H.S., Lee, Y.B., and Lee, Y.L., Kang, J.W. (2018). Increasing Video Compression Efficiency using Residual Data Distribution and Transform. In *Proceedings of the WISET Junior Science & Technology Research Reports, Vol. 1, pp. 350-354.*

### REFERRED SHORT CONFERENCE PAPERS

2025

10. Lee, C.\*, Choi, J.\* & Mutlu, B. (2025). MAP: Multi-user Personalization with Collaborative LLM-powered Agents. In *Proceedings of the 2025 CHI Conference Extended Abstracts on Human Factors in Computing Systems* 

(CHI EA'25).

11. Wang, X., **Lee, C.**, & Mutlu, B. (2025). LearnMate: An LLM-Powered Adaptive Teaching System with Personalized Learning Plans and Tutoring. In *Proceedings of the 2025 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (CHI EA'25).

#### 2024

12. Lee, C. (2024). Design, Development, and Deployment of Context-adaptive AI Systems for Enhanced User Adoption. In *Proceedings of the 2024 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (CHI EA'24).

2023

13. Lee, C., Cagiltay, B., Sullivan, D., & Mutlu, B. (2023). Demonstrating the Potential of Interactive Product Packaging for Enriching Human-Robot Interaction. In *Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction* (HRI'23).

### ACADEMIC SERVICES

#### MENTORING

**Xinyu Jessica Wang**, UW-Madison, 2024 – now Guided development for translation on natural language translation to formal language properties using LLMs Mentor for undergraduate senior thesis

**Kevin Zhao**, UW-Madison, 2024 – now Guided development for model checking techniques using LLMs Mentor for undergraduate senior thesis

**Hongyu Fu**, UW-Madison, 2022 – 2023, now graduate student at Carnegie Mellon University *Guided development of A*<sup>\*</sup> *algorithm for route planning in robot failures* 

**Colin Li**, UW-Madison, 2022 – 2023, now graduate student at University of Southern California *Guided algorithm development using LLMs for robot navigation* 

#### OUTREACH

**UW-Madison Grandparents University**, 2024 Served as one of four instructors to teach grandparents and grandchildren how to program robots

**High school outreach**, 2023 Hosted half-day lab visit for robot demonstration and discussion panel for computer science majors

#### **REFEREE SERVICE**

#### CHI 2025, CHI 2024, HRI 2024, CHI 2023, HRI 2023

TEACHING

**CS 354 Machine Organization and Programming, Teaching Assistant**, UW-Madison, Fall 2020 & Spring 2021 *Coached C programming, data structures, and algorithm assignments for a course of 400+ students* 

**C-Programming, Teaching Assistant**, Sejong University, Spring 2017 & Spring 2018 *Guided students on programming and software design for a course of 120+ students* 

### **RESEARCH EXPERIENCE**

**Research Intern**, January 2020 – July 2020 Seoul National University Hospital Biomedical Research Institute, Seoul, South Korea *Mentor*: Dr. Taehoon Ko

**Undergraduate Research**, Spring 2019 – Fall 2020 Sejong University, Seoul, South Korea *Advisor*: Dr. Hyun-Joon Moon

### SELECTED PRESS

*Bridging the Gap between User Expectations and AI Capabilities: Introducing the AI-DEC Design Tool* in **AI-hub**, August 2024 [link]