Jeongah Jasmine Lee

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Research Interests

Human-Computer Interaction, Artificial Intelligence, Health, Visualization

Education

MS/Ph.D **University of Massachusetts Amherst**, Computer Science   *Amherst, MA, USA*
Sep 2024 - Present
- GPA: 4.0/4.0

B.S **Sungkyunkwan University**, Computer Science and Engineering   *Suwon, Korea*
Mar 2019 - Feb 2024
- GPA: 3.71/4.0 (converted)

The University of Texas at Austin, Electrical and Computer Engineering   *Austin, TX, USA*
Jan 2022 - May 2022
- Exchange student program

Publications

Agentic Accessibility: A New Paradigm for Graphics Accessibility for Blind and Low-Vision
- *Jeongah Lee*, Srikiran Kavuri, Hari Iyer, Ali Sarvghad
- Under Review

From Pixels to Primitives: Evaluating SVG Decomposition for Floor Plan Comprehension in Large Multimodal Models ⬈
- *Jeongah Lee*, Ali Sarvghad
- Under Review

From Text to Visuals: Using LLMs to Generate Math Diagrams with Vector Graphics ⬈
- Jaewook Lee, *Jeongah Lee*, Wanyong Feng, Andrew Lan
- AIED 2025: 26th International Conference on Artificial Intelligence in Education (Acceptance rate: 19%)

IoT Edge-Cloud: An Internet-of-Things Edge-Empowered Cloud System for Device Management in Smart Spaces ⬈
- Yoseop Joseph Ahn, Minje Kim, *Jeongah Lee*, Yiwen Shen, Jaehoon Paul Jeong
- 2023 IEEE Network Magazine

Research Experiences

HCI-VIS lab @ University of Massachusetts Amherst, Graduate Research Assistant   *Amherst, MA, USA*
Sep 2024 - Present
- Advisor: Dr. Ali Sarvghad ⬈ (co-advised by Dr. Ravi Karkar ⬈)
- Work in Progress: (1) AI-powered conversational agent for blind and low-vision individuals (BLV) to enhance image accessibility; (2) AI-powered mobile application designed to support caregivers of people with Alzheimer's disease and related dementias (AD/ADRD)

IoT lab @ Sungkyunkwan University, Undergraduate Student Researcher   *Suwon, Korea*
Jul 2021 - Nov 2021
- Advisor: Dr. Jaehoon Paul Jeong ⬈
- Developed an IoT Edge-Empowered Cloud System for the visual control of IoT devices in a user's smartphone

Work Experiences

Seoul National University Bundang Hospital, Natural Language Processing (NLP) Researcher   *Bundang, Korea*
Mar 2024 - Jul 2024
- Developed a model that predicts lung cancer TNM stage using an Electronic Health Record dataset
- Finetuned Large Language Models (LLMs) in resource-restricted settings, optimizing model performance through tailored prompt engineering techniques

Cipherome, Inc, Machine Learning (ML) Engineer, Intern   *San Jose, CA, USA*
Mar 2023 - Aug 2023
- Developed the pipeline for an ML module within a clinician-focused medical data analysis platform

- Designed Figma wireframes to improve user experience and UI/UX

Naver Boostcamp AI Tech Program, NLP Engineer — *Remote* · Sep 2022 – Feb 2023
- Led projects on Semantic Text Similarity, Relation Extraction, Open-Domain Question Answering, and Chatbot Development tasks

SK Planet Co.,Ltd., Industry-Academic Cooperation Student Researcher — *Suwon, Korea* · Mar 2020 - Dec 2020
- Developed an AR rhythm game application for the Busan One Asia Festival using AR Core to provide location-based interactive experiences

Awards & Honors

[Awards]

- 3rd Place (Grand Prize), Chung-ang University AI and Humanities Academic Paper contest — Jan 2023
- 1st Place (Grand Prize), Kookmin University self-driving contest — Jul 2021 - Nov 2021
- 3rd Place (Grand Prize), Sungkyunkwan University AI x Bookathon contest — Jan 2021
- Volunteering Excellence Prize, NIA(National Information Society Agency) — Dec 2020

[Scholarships]

- Academic Excellence Scholarship (top 12%) — 2022
- Creative Scholarship (100% tuition support) — 2021
- Sungkyun Software Scholarship (100% tuition support) — 2019
- MegastudyEdu Scholarship (external) — 2019

Teaching & Mentoring

[Teaching]

Graduate Teaching Assistant — Sep 2024 - Present
- *CICS 110: Introduction to Programming (Fall 2024)*
  Led two lab sessions (60 students each) with hands-on instruction and grading support
- *CS 383: Artificial Intelligence (Spring 2025)*
  Held office hours for a class of 180 students and mentored 15 group projects
- *CS 571: Data Visualization and Exploration (Summer 2025)*
- *INFO 348: Data Analytics with Python (Fall 2025)*

[Mentoring]

Independent Study Mentor — Feb 2025 - May 2025
- Aishwarya Vishnubhotla, Srikiran Kavuri (CS Undergraduate at UMass), Prachetas Padhi (ECE Master at UMass)
- Topic: Conversational Accessibility - Enhancing Mobile Usability for Older Adults through Task-Oriented Agents

Undergraduate Research Program Volunteers ⧉ — May 2025 - Present
- Gerindra Adi, Vidhaan Kothari, Nish Methuku (CS Undergraduate at UMass)
- Topic: Glanceable Health Visualization for Older Adults Using Large Multimodal Models

Volunteering/Leadership

Panama World Friends Korea ICT e-volunteer — Nov 2020 - Dec 2020

Mobile Application Programming Mentoring at Youngbok Girls' High School — Sep 2019 - Dec 2019

College of Computing Student Council — Mar 2019 - Dec 2019

Skills

Programming Languages: Python, Pytorch, Javascript, Java, Kotlin, C, C++, R
Front-End: HTML, CSS, React.js, D3.js
Back-End: Node.js, MongoDB, MySQL
Tools & Platforms: Git, GitHub, Vercel, Render, Capacitor, Docker, Figma