

Hae-Na Lee

✉ leehaena@msu.edu | [in](#) hae-na-lee |  Hae-Na Lee

Research Interests

Human-computer interaction, human-centered AI, accessible computing, computer vision, machine learning

Education

Stony Brook University

PH.D. IN COMPUTER SCIENCE

• Advisor: Prof. I.V. Ramakrishnan

• Thesis: *Enhancing the Usability of Computer Applications for People with Visual Impairments via UI Augmentation*

Stony Brook, NY, USA

Aug 2016 – May 2023

Seoul National University

M.S. IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

• Advisor: Prof. Suk I. Yoo

• Thesis: *Image Classification using SVM Classifier Learned by AdaBoost Method*

Seoul, South Korea

Mar 2013 – Feb 2015

Sookmyung Women's University

B.S. IN COMPUTER SCIENCE

• *Magna Cum Laude*

Seoul, South Korea

Mar 2009 – Feb 2013

Professional Experience

Michigan State University

ASSISTANT PROFESSOR

• Department of Computer Science and Engineering

East Lansing, MI, USA

Aug 2023 – Present

Stony Brook University

GRADUATE RESEARCH ASSISTANT

• Knowledge Systems Laboratory

Stony Brook, NY, USA

Jan 2019 – May 2023

Meta Platforms, Inc.

SOFTWARE ENGINEER INTERN

• Instagram Relevance Integrity Team

New York, NY, USA

May 2022 – Aug 2022

Broadridge Financial Solutions

RESEARCH INTERN

• Broadridge Innovation Laboratory

Brentwood, NY, USA

Jun 2019 – Aug 2019

Korea Institute of Science and Technology

RESEARCH INTERN

• Center for Robotics Research

Seoul, South Korea

Mar 2015 – Aug 2016

Seoul National University

GRADUATE RESEARCH ASSISTANT

• Artificial Intelligence and Computer Vision Laboratory

Seoul, South Korea

Mar 2013 – Feb 2015

Peer-Reviewed Publications

INTERNATIONAL CONFERENCE

[C.14] Tien Tran, **Hae-Na Lee**, Ji Hwan Park. 2024. "Discovering Accessible Data Visualizations for People with ADHD." Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI) [CHI 2024]

Best Paper Honorable Mention Award (Top 5%)].

- [C.13] Yash Prakash, Mohan Sunkara, **Hae-Na Lee**, Sampath Jayarathna, Vikas Ashok. 2023. “AutoDesc: Facilitating Convenient Perusal of Web Data Items for Blind Users.” Proceedings of the 28th International Conference on Intelligent User Interfaces (IUI).
- [C.12] **Hae-Na Lee**, Yash Prakash, Mohan Sunkara, I.V. Ramakrishnan, Vikas Ashok. 2022. “Enabling Convenient Online Collaborative Writing for Low Vision Screen Magnifier Users.” Proceedings of the 33rd ACM Conference on Hypertext and Social Media (HT).
- [C.11] **Hae-Na Lee**, Vikas Ashok. 2022. “Impact of Out-of-Vocabulary Words on the Twitter Experience of Blind Users.” Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI).
- [C.10] Javedul Ferdous, **Hae-Na Lee**, Sampath Jayarathna, Vikas Ashok. 2022. “InSupport: Proxy Interface for Enabling Efficient Non-Visual Interaction with Web Data Records.” Proceedings of the 27th International Conference on Intelligent User Interfaces (IUI).
- [C.9] **Hae-Na Lee**, Vikas Ashok. 2021. “Towards Enhancing Blind Users’ Interaction Experience with Online Videos via Motion Gestures.” Proceedings of the 32nd ACM Conference on Hypertext and Social Media (HT).
- [C.8] **Hae-Na Lee**, Vikas Ashok, I.V. Ramakrishnan. 2021. “Bringing Things Closer: Enhancing Low-Vision Interaction Experience with Office Productivity Applications.” Proceedings of the ACM on Human-Computer Interaction (EICS).
- [C.7] **Hae-Na Lee**, Sami Uddin, Vikas Ashok. 2020. “TableView: Enabling Efficient Access to Web Data Records for Screen-Magnifier Users.” The 22nd International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS).
- [C.6] **Hae-Na Lee**, Vikas Ashok, I.V. Ramakrishnan. 2020. “Screen Magnification for Office Applications.” The 22nd International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS).
- [C.5] **Hae-Na Lee**, Vikas Ashok, I.V. Ramakrishnan. 2020. “Repurposing Visual Input Modalities for Blind Users: A Case Study of Word Processors.” IEEE International Conference on Systems, Man, and Cybernetics (SMC).
- [C.4] **Hae-Na Lee**, Sami Uddin, Vikas Ashok. 2020. “iTOC: Enabling Efficient Non-Visual Interaction with Long Web Documents.” IEEE International Conference on Systems, Man, and Cybernetics (SMC).
- [C.3] **Hae-Na Lee**, Vikas Ashok, I.V. Ramakrishnan. 2020. “Rotate-and-Press: A Non-visual Alternative to Point-and-Click?” International Conference on Human-Computer Interaction (HCI International).
- [C.2] **Hae-Na Lee**, Vikas Ashok. 2020. “Towards Personalized Annotation of Webpages for Efficient Screen-Reader Interaction.” Proceedings of the 31st ACM Conference on Hypertext and Social Media (HT).
- [C.1] Deokyoung Kang, **Hae-Na Lee**, Suk I. Yoo. 2014. “Detecting Defects in Repeatedly Patterned Image with Spatially Different Level of Noise.” IEEE International Conference on Image Processing (ICIP).

INTERNATIONAL JOURNAL

- [J.3] Mohan Sunkara, Yash Prakash, **Hae-Na Lee**, Sampath Jayarathna, Vikas Ashok. 2023. “Enabling Customization of Discussion Forums for Blind Users.” Proceedings of the ACM on Human-Computer Interaction (EICS).
- [J.2] Javedul Ferdous, **Hae-Na Lee**, Sampath Jayarathna, Vikas Ashok. 2023. “Enabling Efficient Web Data-Record Interaction for People with Visual Impairments via Proxy Interfaces.” ACM Transactions on Interactive Intelligent Systems (TiiS).
- [J.1] **Hae-Na Lee**, Vikas Ashok. 2022. “Customizable Tabular Access to Web Data Records for Convenient Low-Vision Screen Magnifier Interaction.” ACM Transactions on Accessible Computing (TACCESS).

Scholarships and Awards

- 2024 **CHI Honorable Mention Award**, ACM Conference on Human Factors in Computing Systems (CHI)
- 2019 **Excellence as a TA Award**, Department of Computer Science, Stony Brook University

- 2016 – 2019 **University Fellowship**, Stony Brook University
- 2013 – 2015 **Global PhD Fellowship**, National Research Foundation of Korea
Research Topic: *Image Classification using Sparse and Hierarchical Representation of Classified Object Image Data*
- 2013 **Academic Excellence Scholarship**, Seoul National University
- 2009 – 2012 **Academic Excellence Scholarship**, Sookmyung Women’s University

Teaching Experience

Michigan State University

East Lansing, MI, USA

INSTRUCTOR

Jan 2024 – Present

- Spring 2024 **Selected Topics in Computer Science (Human-Computer Interaction) (CSE 491)**,
Instructor

Stony Brook University

Stony Brook, NY, USA

GRADUATE TEACHING ASSISTANT

Aug 2016 – Dec 2018

- Fall 2018 **Artificial Intelligence (CSE 537)**, Graduate Teaching Assistant
- Spring 2018 **Introduction to Theory of Computation (CSE 303)**, Graduate Teaching Assistant
- Fall 2017 **Foundations of Computer Science I (CSE 215)**, Graduate Teaching Assistant
- Spring 2017 **Introduction to Computers (CSE 101)**, Graduate Teaching Assistant
- Fall 2016 **Computer Science I (CSE 114)**, Graduate Teaching Assistant

Professional Service

Reviewer

- ACM TRANSACTIONS ON ACCESSIBLE COMPUTING (TACCESS)
- ACM CONFERENCE ON COMPUTER-SUPPORTED COOPERATIVE WORK AND SOCIAL COMPUTING (CSCW)
- ACM DESIGNING INTERACTIVE SYSTEMS (DIS)
- ACM CONVERSATIONAL USER INTERFACES (CUI)
- INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION AND ARTIFICIAL INTELLIGENCE (ICPRAI)

2024