Hansol Lee

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RESEARCH INTERESTS

I study how data and algorithms are used to evaluate people, and whether those systems are valid and fair. My work spans learning analytics, human-AI decision-making, and algorithmic fairness, grounded in measurement and causal inference.

EDUCATION

Ph.D., Education Data Science, Stanford University *Expected 2026*
Committee: Benjamin W. Domingue, Nick Haber, Candace Thille, René F. Kizilcec

M.S., Computer Science, Cornell University *2021*
Committee: Thorsten Joachims, René F. Kizilcec

B.A., Computer Science (Minor in Psychology), Cornell University *2019*

PUBLICATIONS

Google Scholar (June 1, 2026): 824 citations · h-index 8 · i10-index 8

Peer-Reviewed Journal & Conference Papers

Hardy, M., Reuel, A., Zhang, L., Casabianca, J. M., Truong, S., Dave, Y., **Lee, H.**, Domingue, B. W., & Koyejo, S. (2026). AI Cartography: Mapping the Latent Landscape of AI Benchmark Ecosystems. In *Proceedings of the 43rd International Conference on Machine Learning (ICML '26)*.

Lee, H., Lichand, G., Barnard, C., Klotz, K., Thille, C., Kim, Y., & Domingue, B. W. (2026). Revisiting the Regularity of Student Learning Rate: Sensitivity to Which Observations Are Included. In *Proceedings of the Thirteenth ACM Conference on Learning @ Scale (L@S '26)*.

Kim, Y., **Lee, H.**, Thille, C., & Piech, C. (2026). A Large-Scale Observational Study on Obtaining Lightweight, Randomized Weekly Student Feedback. In *Proceedings of the Thirteenth ACM Conference on Learning @ Scale (L@S '26)*.

Lee, H., Alvero, A., Kizilcec, R. F., & Joachims, T. (2026). Does Algorithmic Uncertainty Sway Human Experts? Evidence from a Field Experiment in Selective College Admissions. In *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT '26)*.

Nadela, S. D., **Lee, H.**, Jain, N., Gupta, A., Zhang, X., & Domingue, B. W. (2026). The Item Response Warehouse: What It Is, How to Use It, and Targets for Potential Improvements. *Chinese/English Journal of Educational Measurement and Evaluation (*教育测量与评估双语期刊*), 7*(1), 3.

Lee, H., Cho, J. B., Matteson, D. S., & Domingue, B. W. (2025). Dynamic Bayesian Item Response Model with Decomposition (D-BIRD): Modeling Cohort and Individual Learning Over Time. In *Proceedings of the Artificial Intelligence in Measurement and Education Conference (AIME-Con): Full Papers* (pp. 398–405).

Domingue, B. W., Braginsky, M., Caffrey-Maffei, L., Gilbert, J. B., Kanopka, K., Kapoor, R., **Lee, H.**, Liu, Y., Nadela, S., Pan, G., Zhang, L., Zhang, S., & Frank, M. C. (2025). An introduction to the Item Response Warehouse (IRW): A resource for enhancing data usage in psychometrics. *Behavior Research Methods, 57*(10), 276.

Tan, M., **Lee, H.**, Wang, D., & Subramonyam, H. (2024). Is a Seat at the Table Enough? Engaging Teachers and Students in Dataset Specification for ML in Education. In *Proceedings of the ACM Conference on Computer-Supported Cooperative Work (CSCW)*.

Lee, H., Joachims, T., & Kizilcec, R. F. (2023). Evaluating a Learned Admission-Prediction Model as a Replacement for Standardized Tests in College Admissions. In *Proceedings of the 10th ACM Conference on Learning @ Scale (L@S '23)*. **Best Paper Award.**

Yu, R., **Lee, H.**, & Kizilcec, R. F. (2021). Should College Dropout Prediction Models Include Protected Attributes? In *Proceedings of the ACM Conference on Learning @ Scale (L@S)*. **Best Paper Honorable Mention.**

Cuadra, A., Li, S., **Lee, H.**, Cho, J., & Ju, W. (2021). My bad! Repairing intelligent voice assistant errors improves interaction. *Proceedings of the ACM on Human-Computer Interaction, 5*(CSCW1).

Manuscripts Under Review

Lee, H., Cho, J., Haber, N., Domingue, B., & Koyejo, S. (2026). Differential item functioning as an item-level diagnostic for LLM benchmarks. *Manuscript submitted for publication*.

Conference Presentations & Workshops

Lee, H., & Cho, J. (2025). PBL Studio: AI-Supported Tool for Intentional Project Ideation. In *Proceedings of ACM Learning @ Scale (L@S) 2025, Demo Track*.

Lee, H., & Kizilcec, R. F. (2020). Evaluation of Fairness Trade-offs in Predicting Student Success. In *Proceedings of the Conference on Educational Data Mining (EDM), Fairness, Accountability, and Transparency in Educational Data (FATED) Workshop*.

Book Chapters

Kizilcec, R. F., & **Lee, H.** (2022). Algorithmic Fairness in Education. In W. Holmes & K. Porayska-Pomsta (Eds.), *The Ethics of Artificial Intelligence in Education*. Routledge.

Preprints

Cuadra, A., **Lee, H.**, Cho, J., & Ju, W. (2021). Look at Me When I Talk to You: A Video Dataset to Enable Voice Assistants to Recognize Errors. *arXiv:2104.07153*.

SOFTWARE

irw (R package). *Lead developer & maintainer*. Programmatic access to the Item Response Warehouse (IRW), an open repository of harmonized item-response datasets. github.com/itemresponsewarehouse/Rpkg

irw (Python package). *Lead developer & maintainer*. Python client for accessing and analyzing data from the Item Response Warehouse (IRW). github.com/itemresponsewarehouse/Python-pkg

GRANTS & FELLOWSHIPS

2026	Stanford GSE Dissertation Support Grant ($5,000)
2021	Stanford Graduate Fellowship *(full Ph.D. funding, 3 years)*

HONORS & AWARDS

2026	Psychometric Society Travel Award ($1,000)
2024	Full Travel Award, Thought Summit on the Future of Survey Science *(6 recipients selected nationally)*

2023 **Best Paper Award**, ACM Learning @ Scale *(83 submissions, 23 accepted, 2 awards)*

2021 **Best Paper Honorable Mention**, ACM Learning @ Scale *(63 submissions, 19 accepted, 3 nominated)*

2021 Outstanding Teaching Assistant Award, Cornell Computing & Information Science

2018 Cornell Tech Summer Research Experience Award ($11,500)

INVITED TALKS

Apr 2026 **PRIISM Applied Statistics Seminar**, NYU Steinhardt

Mar 2024 **Algorithmic Fairness Seminar**, Stanford University

RESEARCH EXPERIENCE

2021–present **Graduate Student Researcher**, Stanford University
PI: Ben Domingue

2022 **Summer Research Intern**, Stanford HAI & IBM Research
PIs: Hari Subramonyam, Dakuo Wang

2019–2021 **Graduate Student Researcher**, Cornell University *(NSF)*
PIs: Thorsten Joachims, René F. Kizilcec

2018–2019 **Undergraduate Researcher**, Cornell Tech
PI: Wendy Ju

2017 **Machine Learning Engineering Intern**, Scatter Lab

TEACHING EXPERIENCE

All roles as Teaching Assistant.

2024 **EDUC 423A** — Introduction to Education Data Science, Stanford University

2022–2024 **EDUC 259** — Education Data Science Seminar, Stanford University

2019–2021 **CS 1110** — Introduction to Computing with Python, Cornell University

2019 **CS 6780** — Advanced Machine Learning, Cornell University

2018 **CS 4780** — Machine Learning for Intelligent Systems, Cornell University

2018 **CS 4700** — Foundations of Artificial Intelligence, Cornell University

PROFESSIONAL SERVICE & LEADERSHIP

Reviewing

International Conference on Machine Learning (ICML), 2026 — *Silver Reviewer Award*; NeurIPS, 2026; ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2026; ACM Learning @ Scale (Program Committee), 2026; Journal of Educational Data Mining (JEDM), 2026; Computers & Education: Artificial Intelligence, 2025–2026; Psychometrika, 2026; Artificial Intelligence in Measurement and Education (AIME) SIG, NCME, 2025.

Founding & Advisory

2023–2024 **Co-founder & Academic Advisor**, Learnest (learnest.org)
Co-founded a nonprofit promoting ethical AI in education. Led development of a graduate-student fellowship program (funded by a $10,000 grant from Prof. Zach Pardos' lab at UC Berkeley) and organized community-building initiatives supporting early-career scholars in AI and education.

University & Departmental Service

2024–2025 **Reviewer**, Dissertation Support Grant Committee, Stanford GSE
2024 **Student Volunteer**, Stanford SWAYWO Conference
2023–2024 **Programming Chair**, Stanford Korean Student Association
2023–2024 **Student Affiliate**, Pathways Network, Stanford University
2022–present **Buddy Program Mentor**, Korean Student Association at Stanford
2022–2023 **Peer Mentor**, Peer Mentoring Program, Stanford GSE

MEDIA COVERAGE

Feb 2024 "A Data-Centered Approach to Education AI." *Stanford HAI*.
Jun 2021 "Testing AI fairness in predicting college dropout." *Cornell Chronicle*.
Apr 2021 "Questioning the role of AI in exam marking." *Raconteur*.