Curriculum Vitae

Heeryung Choi, Ph.D., Research Fellow

Contact Information

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Ann Arbor, MI 48109

Education

University of Michigan, School of Information, Ann Arbor, MI, US
Ph.D. in Information with Data Science Certificate, 2016 - 2022
Dissertation: SRLA: Self-Regulated Learning Analytics
Advisor: Christopher Brooks
Committee: Phil Winne, Stephanie Teasley, Andrew Krumm

Seoul National University, Program of Cognitive Science, Seoul, South Korea
M.S. in Cognitive Science, 2014 - 2016
Advisor: Joonhwan Lee

Seoul National University, School of Education, Seoul, South Korea
B.A. in English Education, 2009 - 2014
Summa Cum Laude

Research Experience

University of Michigan, Ann Arbor, MI, US
School of Information 2024 - present
Postdoctoral Research Fellow,
Developing an AI hintbot and evaluating its impact on learning

Massachusetts Institute of Technology, Cambridge, MA, US
Center for Transportation and Logistics 2022 - 2024
Digital Learning Postdoctoral Associate,
Leading a project to develop learning analytics dashboard for 10K+ students
for online learners of MITx MicroMasters Program

Grants and Awards

Grants

MIT Integrated Learning Initiative (ili) Learning Effectiveness Grant (50K USD) June, 2022

Awards

Outstanding Graduate Student Instructor of the Year	2020 - 2021
Samsung PhD Scholarship	2016 - 2020
Korean National Research Scholarship	2015
Graduated with Honors (Summa Cum Laude)	2014
Seoul National University Merit Scholarship	2011 - 2013

Teaching Experience

Instructor/Course Lead

SC0x: Supply Chain Analytics (online, $\geq 10k$ students)	2022 - 2024
SIADS 505: Data Manipulation (online, ≥ 20 students)	2021

Teaching Assistant 2018-2021
SIADS 521: Visual Exploration of Data (online, ≥ 240 graduate students)

SIADS 505: Data Manipulation (online, $\geq$ 270 graduate students)
SI 630: Natural Language Processing: Algorithms and People
(residential, $\geq$ 70 graduate students)
SI 671: Data Mining (residential, $\geq$ 50 graduate students)

Publications

Peer-reviewed Journal Papers

Choi, H., Jovanovic, J., Poquet, S., Brooks, C., Joksimovic, S., Williams, J. J. (2023). The Benefit of Reflection Prompts Encouraging Learning with Hints in Programming Education. *The Internet and Higher Education.*

Brooks, C., Quintana, R. M., **Choi, H.**, Quintana, C., NeCamp, T., Gardner, J. (2021). Towards Culturally Relevant Personalization at Scale: Experiments with Data Science Learners. *International Journal of Artificial Intelligence in Education*, pp. 1-22.

Peer-reviewed Archival Conference Proceedings

Singh, A., Fariha, A., Brooks, C., Soares, G., Henley, A., Tiwari, A., M, Chethan., **Choi, H.**, Gulwani, S. (2024) Investigating Student Mistakes in Introductory Data Science Programming. In *Proceedings of the 55th ACM Technical Symposium on Computer Science Education.*

Choi, H., Borrella, I., Ponce-Cueto, E. (2023). Meta-LAD: Developing a Learning Analytics Dashboard with Theoretically Grounded and Context-Specific Approaches. In *Proceedings of the 9th IEEE Learning with MOOCs (LWMOOCs).* ***Best paper nominated.***

Choi, H., Winne, P. H., Brooks, C., Li, W., Shedden, K. (2023). Logs or Self-Reports? Misalignment Between Behavioral Trace Data and Surveys When Modeling Learner Achievement Goal Orientation. In *Proceedings of the 13th International Conference on Learning Analytics & Knowledge (LAK).*

Choi, H., Mills, C., Brooks, C., Doherty, S., Singh, A. (2022). Design Recommendations for Using Textual Aids in Data-Science Programming Courses. In *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education.*

Choi, H., Dowell, N., Brooks, C., Teasley, S. (2019). Social Comparison in MOOCs: Perceived SES, Opinion, and Message Formality. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 160-169).

Yan, W., Dowell, N., Holman, C., Welsh, S. S., **Choi, H.**, Brooks, C. (2019). Exploring Learner Engagement Patterns in Teach-Outs Using Topic, Sentiment and On-Topicness to Reflect on Pedagogy. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 180-184).

Lin, Y., Dowell, N., Godfrey, A., **Choi, H.**, Brooks, C. (2019). Modeling Gender Dynamics in Intra and Interpersonal Interactions During Online Collaborative Learning. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 431-435).

Book Chapter

Choi, H., Winne, P. H., Brooks, C. (2023). Reconfiguring Measures of Motivational Constructs Using State-Revealing Trace Data. In *Unobtrusive Observations of Learning in Digital Environments*, Springer (pp. 73-89).

Workshops and Posters

Choi, H., Brooks, C., Hayward, C., Kitto, K., Gasevic, D., Pardo, A., Winne, P., Heffernan., N. (2021). Engineering Learning Analytics Technology Environments (ELATE): Understanding Iteration Between Data and Theory, and Design and Deployment, *Proceedings of the 11th international conference on learning analytics & knowledge*.

Choi, H., Dowell, N., Brooks, C., Teasley, S. (2019). Social Comparison in MOOCs: Perceived SES, Opinion, and Message Formality. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge* (pp. 160-169).

Choi, H., Wang, Z., Brooks, C., Collins-Thompson, K., Reed, B. G., Fitch, D. (2017). Social Work in The Classroom? A Tool to Evaluate Topical Relevance in Student Writing. In *Proceedings of the 10th International Conference on Educational Data Mining* (p. 386).

Choi, H., Brooks, C., Collins-Thompson, K. (2017). What Does Student Writing Tell Us about Their Thinking on Social Justice?. In *Proceedings of the Seventh International Learning Analytics & Knowledge Conference* (pp. 594-595).

Invited Talks

Choi, H. (2023, Oct). Advancing Learning Analytics: Insights From Trace and Survey Data on Self-Regulated Learning, *Cornell University, Ann S. Bowers College of Computing and Information Science*.

Choi, H. (2023, Aug). Upskilling SCM Professionals Through Online Learning, *Massachusetts Institute of Technology, Center for Transportation and Logistics Monthly Research Briefing*.

Choi, H. (2023, Mar). Survey or Trace Data?: Steps to Understand Self-Regulated Learning Better, *Syracuse University, School of Education*.

Choi, H. (2023, Jan). Meta-LAD: A Dashboard Supporting Self-Regulated Learning, *Massachusetts Institute of Technology, Open Learning, MITx Digital Learning Lab*.

Choi, H. (2022, Oct). Interviewed for INFO 4100 Learning Analytics, *Cornell University, Department of Information Science*.

Choi, H. (2021, Oct). Using Data to Understand Self-Regulated Learning, *Massachusetts Institute of Technology, Center for Transportation and Logistics*.

Choi, H. (2021, May). Engineering Learning Analytics Technology Environments (ELATE), *University of Michigan, Center of Academic Innovation*.

Service

Organizing Committee

International Conference on Educational Data Mining 2024 (EDM' 24) — 2023 - 2024
Poster & Demo Track Chair

Program Committee

International Educational Data Mining Conference (EDM)	2024 - present
ACM Learning Analytics and Knowledge Conference (LAK)	2020 - present
Artificial Intelligence in Education Conference (AIED)	2020 - present

Peer-reviewing (Journals)

British Journal of Educational Technology (BJET) 2022 - present
International Journal of Artificial Intelligence in Education (IJAIED) 2020 - present
Journal of Learning Analytics (JLA) 2019 - present

Peer-reviewing (Conferences)

International Educational Data Mining Conference (EDM) 2024 - present
American Educational Research Association (AERA) Annual Meeting 2023 - present
Learning with MOOCs (LWMOOCs) 2023 - present
Artificial Intelligence in Education Conference (AIED) 2020 - present
ACM Learning Analytics and Knowledge Conference (LAK) 2016 - present

Peer-reviewing (Grants)

Society for Learning Analytics Research (SoLAR)
Early Career Research (ECR) Grant 2023 - present

Leadership

Society for Learning Analytics Research (SoLAR)
Diversity and inclusion working group 2019 - present

University of Michigan, School of Information,
Doctoral Executive Committee (DEC) 2017 - 2018

Media Coverage

MIT Open Learning, New dashboard supports online learners self-regulated learning and performance, Oct 2023

Reference

Christopher Brooks, Ph.D.
Associate Professor,
University of Michigan,
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Philip H. Winne, Ph.D.
Professor Emeritus & FRSC,
Simon Fraser University,
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Burnaby, BC, Canada
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Stephanie Teasley, Ph.D.
Research Professor,
University of Michigan,
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Oleksandra Poquet, Ph.D.
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Technical University of Munich,
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