Heeryung Choi, Ph.D., Research Fellow

CONTACT INFORMATION	University of Michigan School of Information, 105 S State Street, Ann Arbor, MI 48109	heeryung@umich.edu http://heeryung.github.io/

EDUCATION

University of Michigan, School of Information, — Ann Arbor, MI, US — 2016 - 2022
Ph.D. in Information with Data Science Certificate,
  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 — 2014 - 2016
M.S. in Cognitive Science,
  Advisor: Joonhwan Lee

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

Course Lead — 2022 - 2024
  SC0x: Supply Chain Analytics (online, $\geq 10k$ students)

Instructor — 2021
  SIADS 505: Data Manipulation (online, ≥ 20 students)

Teaching Assistant for Graduate Courses 2018-2021
SIADS 521: Visual Exploration of Data (online, $\geq$ 240 students)
SIADS 505: Data Manipulation (online, $\geq$ 270 students)
SI 630: Natural Language Processing: Algorithms and People
(residential, $\geq$ 70 students)
SI 671: Data Mining (residential, $\geq$ 50 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. (in press) 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 Environ-*

ments, 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
Co-chair for the posters and demonstrations track	

Program Committee

ACM Learning Analytics and Knowledge Conference (LAK)	2020 - present
Artificial Intelligence in Education Conference (AIED)	2020 - present

Peer-reviewing (Journals)

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

Peer-reviewing (Conferences)

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

REFERENCE

Christopher Brooks, Ph.D.
Associate Professor,
University of Michigan,
School of Information,
Ann Arbor, MI, USA
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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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Oleksandra Poquet, Ph.D.
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Technical University of Munich,
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