Daniel J Noh — (he/him)

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Research Interests

learning sciences, human-computer interaction, care & maintenance, design & computing education, constructionism, participatory design, design of learning spaces, accessibility, responsible technologies

Education

Expected 2029	**University of Pennsylvania** *Ph.D.,* Learning Sciences & Technologies Advisor: Yasmin B. Kafai
2022	**Harvard University** *Ed.M.,* Learning Design, Innovation & Technology
2021	**Carnegie Mellon University** *B.Arch*., Architectural & Building Sciences/Technology (University & College Honors) Minors: Human-Computer Interaction & Design for Learning

Research Experience

Aug 2024 to current	**University of Pennsylvania** Graduate School of Education — Kafai Lab (PI: Yasmin Kafai) NSF Grants #2333469, #2342438, #2414590 Spencer, Kapor, William T. Grant, Alfred P. Sloan Foundations Rapid Response Funding Google Academic Research Award: AI for Privacy, Safety, & Security (2025) *Research Fellow* ▪ Collecting and analyzing data to investigate learners' conceptions of AI/ML systems and algorithmic justice in formal and informal learning environments ▪ Developing related learning tools and activities through participatory design with educators and youth
Jun 2024 to Aug 2024	**Northeastern University** College of Arts, Media and Design (PI: Sara Hendren) *Research Assistant* ▪ Developed experimental pedagogical modules for the studio-seminar course, *Investigating Normal: Design and Disability*, identifying best practices for accessible spatial and digital design, related precedent projects, and assessment strategies for proposed activities and curricular prompts
Sep 2021 to Jun 2022	**Harvard University** Project Zero — Designing Learning Places Lab (PI: Daniel Wilson) *Research Assistant* ▪ Conducted a literature review (white paper) on the qualities of materials, objects, and environments that support the learning practices of noticing, wondering, and help-seeking ▪ Designed a practical toolkit to help educators, administrators, and designers adopt the findings into the design of learning spaces ▪ Co-developed the course, *Designing Learning Places*, currently taught at the Harvard Graduate School of Education

Sep 2020 to Sep 2021	**Carnegie Mellon University**
	Human-Computer Interaction Institute — ClassInSight (PI: Amy Ogan)

James S. McDonnell Foundation Grant #1822813

Research Associate (May 2021 to Sep 2021)
Research Assistant (Sep 2020 to May 2021)
- Drafted and conducted focus group protocols, interview questions, and participatory design sessions to understand how classroom discussion data visualizations and personalized professional development can scaffold teacher agency and meaning-making
- Designed prototypes and data visualizations for a conversation support professional development tool

Honors & Awards

2024-2028	**Fontaine Society Fellowship,** University of Pennsylvania
2021	**GEE! Learning Games Award Finalist,** GEE! Learning Games Awards
2020	**Askwith Kenner Artist Grant,** CMU Department of Modern Languages
2020	**Louis F. Valentour Scholarship,** CMU School of Architecture

Publications

Journal Articles (Peer-Reviewed)

[J.1] Morales-Navarro, L., **Noh, D. J.**, & Kafai, Y. B. (2025). High school students building babyGPTs: Engaging in data practices and addressing ethical issues through the construction of generative language models. *International Journal of Child-Computer Interaction, 45*, 100769.
DOI: https://doi.org/10.1016/j.ijcci.2025.100769

Conference Publications (Peer-Reviewed, Full Papers)

[F.3] **Noh, D. J.**, Fields, D. A., Kafai, Y. B., & Metaxa, D. (Accepted, ISLS 2026). "You Can Actually Do Something": Shifts in High School Computer Science Teachers' Conceptions of AI/ML Systems and Algorithmic Justice.

[F.2] **Noh, D. J.** (2026). Guide on the Side or Sage on the Stage?: Exploring the Relationship Between Teachers' Spatial and Verbal Discursive Strategies. In G. Carmona, C. Lima, M. J. Santos, H. Benítez, L. Montero-Moguel, & B. Galarza-Tohen (Eds.), *Advances in Quantitative Ethnography* (Vol. 2677, pp. 509–523). Springer Nature Switzerland.
DOI: https://doi.org/10.1007/978-3-032-12229-2_33

[F.1] **Noh, D. J.**, Fields, D. A., Morales-Navarro, L., Cabrera-Sutch, A. M., Kafai, Y. B., & Metaxa, D. (2025). Youth as Advisors in Participatory Design: Situating Teens' Expertise in Everyday Algorithm Auditing with Teachers and Researchers. *Proceedings of the 24th Interaction Design and Children*, 415–428.
DOI: https://doi.org/10.1145/3713043.3728849 [Acceptance Rate: 29%]

Conference Publications (Peer-Reviewed, Short Papers & Symposia)

[S.4] Morales-Navarro, L., Kafai, Y., Hilke, O., Pope, N., Tedre, M., **Noh, D. J.**, Fields, D. A., Metaxa, D., Solyst, J., Shapiro, R. B., Fong, C., Nurdin, F., Sharma, S., Iivari, N., Klemettilä, P. A., Bilstrup, K-E., Musaeus, L. H., Landesman, R., Everson, J., Ryoo, J. & Iversen, O. S. (Accepted, ISLS 2026). Learning to Deconstruct AI/ML Systems: Scaffolds to Support Learners in Critically Evaluating AI/ML Systems.

[S.3] Ching, C., Cortez, A., Higgs, J., Grover, S., Vakil, S., Paik, W., Abdul, S., Knight, M., Ryoo, J., Choi, M., Wei, W., Clarke, R., Blizzard-Caron, J., Stark, L., Kohn, L., Voloch, D., Ochterski, J., Lizárraga, J., Wang, X. C., Xing, G., Dantu, K., Morales-Navarro, L., **Noh, D.**, Kafai, Y. & Stornaiuolo, A. (Accepted, ISLS 2026). Artificial Intelligence and Human Purposes: Dialogues about Creativity and Control.

[S.2] Morales-Navarro, L., **Noh, D. J.**, & Kafai, Y. (2025). Building babyGPTs: Youth engaging in data practices and ethical considerations through the construction of generative language models. *Proceedings of the 24th Interaction Design and Children*, 1021–1026.
DOI: https://doi.org/10.1145/3713043.3731525 [Short Paper]

[S.1] Kafai, Y., Shapiro, R. B., Jetzinger, F., Michaeli, T., Tedre, M., Vartiainen, H., Iivari, N., Musaeus, L. H., Iversen, O. S., Ali, S., Bodon, H., Butler, M., Kshirsagar, K., Smith, M., Quiterio, A., Worsley, M., Kumar, V., Morales-Navarro, L., **Noh, D.**, Pea, R., & Philip, T. M. (2025). Youth as Designers of Artificial Intelligence and Machine Learning Technologies: What Do We Know About the Opportunities and Challenges of K-12 Students Creating Their Own Applications?. In *Proceedings of the 19th International Conference of the Learning Sciences*, 2260-2268. International Society of the Learning Sciences.
DOI: https://doi.org/10.22318/icls2025.362276 [Symposium]

Posters, Presentations & Workshops

[P.6] **Noh, D.** Fields, D. A., Kafai, Y. B. & Metaxa, D. (2026, April). "A Path to Activism": CS Teachers Developing Critical Agency with Algorithmic Systems through Algorithm Auditing. *2026 American Educational Research Association (AERA) Conference.* Los Angeles, CA.

[P.5] Morales-Navarro, L., **Noh, D.** & Kafai, Y. B. (2026, April). High School Students as Designers of Generative Language Models. *2026 American Educational Research Association (AERA) Conference.* Los Angeles, CA.

[P.4] Morales-Navarro, L., **Noh, D.** & Kafai, Y. B. (2026, April). Teens' Ethical Considerations When Building babyGPTs. *2026 American Educational Research Association (AERA) Conference.* Los Angeles, CA.

[P.3] Fields, D. A., Morales-Navarro, L., **Noh, D.**, Kafai, Y. B. & Ottina, J. (2025, October). Workshop: Investigating the Black Box of Artificial Intelligence and Machine Learning: Promoting Youth and Teacher Agency through Algorithm Auditing. *Connected Learning Summit 2025.* Virtual.

[P.2] **Noh, D. J.**, Morales-Navarro, L., & Kafai, Y. (2025, October). What Comes Next?: Youth Learning About and Designing Markov Chains through Unplugged Activities. *Connected Learning Summit 2025.* Virtual.

[P.1] Morales-Navarro, L., **Noh, D. J.**, & Kafai, Y. (2025, October). What happens when teens design small generative language models? A case study of teenagers building babyGPTs. *Connected Learning Summit 2025.* Virtual.

Public Scholarship (White Papers, Curriculum & Other)

[PS.2] Butapetch, H., Fields, D., Hanna, S., Landa. J., Morales-Navarro, L., Myers, T., **Noh, D.**, Ottina, J., & Ulrich, A., with Kafai, Y. & Metaxa. D. (2025). Introduction to Algorithm Auditing: Lessons for High School Computer Science (beta version).
Available at: https://bit.ly/k12aiaudit-lessons

[PS.1] Gonzalez, P. G., **Noh, D.**, & Wilson, D. (2022). Making the Space for Learning. *Presidents and Fellows of Harvard College. Cambridge, MA.*
Available at: https://pz.harvard.edu/resources/making-the-space-for-learning

Teaching

Jan 2022 to Jan 2025	**Harvard University** Graduate School of Education **As a Teaching Fellow I was involved in course redesign, development of teaching material, leading weekly in-class lectures/workshops, and providing constructive student feedback* *Teaching Fellow,* **Rapid Prototyping of Educational Products** Instructor: Bertrand Schneider (Winter 2025) *Lead Teaching Fellow & Course Co-Designer,* **Designing Learning Places** Instructor: Daniel Wilson (Spring 2023, Spring 2024) *Teaching Fellow,* **Digital Fabrication and Making in Education** Instructor: Bertrand Schneider (Spring 2022, Fall 2022, Spring 2024) *Teaching Fellow,* **Transforming Education Through Emerging Technologies** Instructor: Bertrand Schneider (Spring 2024) *Teaching Fellow,* **Multimodal Learning Analytics** Instructor: Bertrand Schneider (Spring 2023)
Feb 2024 to May 2024	**Design Museum Everywhere / CoDesign Collaborative** High School Inclusive Design Challenge (Co-Instructor: Rosa Weinberg) *Design Educator* ▪ Planned and facilitated a three-week long program on accessibility, inclusive design, and participatory design with six financially-compensated high school students
Sep 2022 to Jan 2024	**Massachusetts Institute of Technology** MIT Museum *Technical Instructor / Museum Educator* ▪ Designed and facilitated novel hands-on STEAM learning experiences and public events to build meaningful connections to scientific inquiry and design exploration ▪ Established standard operating procedures and trained museum educators on various fabrication tools in the makerspace (laser cutter, 3D printers, and vinyl cutters) ▪ Mentored MIT undergraduate research assistants (UROP) and museum teen interns on the development and facilitation of design-based, hands-on learning experiences ▪ Co-led the development of the Design Redefined series, co-hosted by MIT MAD and Innovators for Purpose

Advising & Mentoring

UG = Undergraduate; M = Masters; ***** = Co-Authored Publication

Current	**University of Pennsylvania** ▪ Ashley Zingillioglu (M, Learning Sciences & Technologies, 2026-present, with Luis Morales-Navarro) ▪ Lucianne Servat***** (UG, Cognitive Science, 2025-2026, with Luis Morales-Navarro) ▪ Elo Esalomi (UG, Artificial Intelligence, 2025, with Luis Morales-Navarro)
2023-2024	**Massachusetts Institute of Technology (Museum + MAD)** ▪ Wonuola Abiodun (UG, Civil Engineering + Architecture, 2023-2024, with Rosa Weinberg) ▪ Alexandra Coston (UG, Architecture, 2023-2024, with Rosa Weinberg) ▪ Kimberly McPherson (UG, Computer Science, 2023, with Rosa Weinberg)

Service

Journal Reviewing	JLS – Journal of the Learning Sciences (2026)

Conference Reviewing	ACM IDC – Interaction Design & Children (2026) ICLS – International Conference of the Learning Sciences (2026) EAAI – Educational Advances in Artificial Intelligence (2026) CLS – Connected Learning Summit (2025) ICQE – International Conference on Quantitative Ethnography (2025)

Institutional Service	**Massachusetts Institute of Technology** ▪ MIT-Nord Anglia, STEAM Teacher Professional Development Mentor (2024) **Carnegie Mellon University** ▪ School of Architecture, Student Portfolio Reviewer (2021) ▪ School of Architecture, Carnival Pavilion Build Team (2019) ▪ School of Architecture, Architecture Peer Mentor (2017)

Other Service	**Carnegie Museum of Natural History** ▪ Museum Volunteer (2020)

Other Experience

Aug 2021 to May 2022	**Harvard University** Graduate School of Education – Education Innovation Studio *Makerspace Assistant* ▪ Taught graduate students how to use fabrication tools including laser cutters, 3D printers, vinyl cutters, sewing machine, and power tools

May 2020 to Aug 2020	**Carnegie Museum of Natural History** Center for Anthropocene Studies (Advisors: Asia Ward & Marti Louw) *Center for Anthropocene Studies Education Intern* ▪ Produced educational videos about sewage treatment and potable water, presented at ALCOSAN's 2020 and 2021 Open House ▪ Published corresponding articles in the museum's monthly newsletters and website

May 2018 to Jan 2021	**Carnegie Mellon University** School of Architecture *Design Fabrication (dFab) Lab Assistant* ▪ Assisted architecture students and faculty on implementing digital fabrication methods into their project workflow (laser cutters, 3D printers, CNC-mill, and vacuum formers)

Skills & Tools

Software	Photoshop, Illustrator, InDesign, Premiere Pro, Audacity, Figma, Tableau, Fusion360, Rhino3D/Grasshopper

Programming	Python, JavaScript, HTML/CSS, R

Fabrication	Laser Cutting, 3D Printing, Vinyl Cutting, Vacuum Forming, Sewing, Woodworking, Soldering, Basic Electronics/Microcontrollers

Design	Rapid Prototyping, Wireframing, Storyboarding, Illustrating, Data Visualization, Graphic Design, Architectural Design, Learning Design, Video Editing, Web Design & Development

Language	English (native), Korean (native), Japanese (novice)
Methods	Thematic Analysis, Interviews, Participatory Design Research, Youth Participatory Action Research, Multi-Modal Learning Analytics, Epistemic/Ordered Network Analysis, Multilevel Modeling

Professional Memberships

AERA – American Education Research Association
ISLS – International Society of the Learning Sciences
ACM – Association of Computer Machinery