Daniel J Noh — (he/him)

Ph.D. Student, University of Pennsylvania

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Research Interests

Learning sciences, human-computer interaction, participatory design, design of learning spaces, constructionism, design education, accessibility, care in design & computing, 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

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
- Investigating learners' conceptions of AI/ML systems and algorithmic justice in formal and informal educational settings and developing related learning tools 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 on the qualities of materials, objects, and environments that support the learning practices of noticing, wondering, and help-seeking

Sep 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, and power tools.

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 reflection in classrooms
- Designed prototypes and data visualizations for a conversation support professional development tool

May 2020 to Aug 2020 | **Carnegie Museum of Natural History**
Center for Anthropocene Studies (Advisors: Asia Ward & Marti Louw)

Center for Anthropocene Studies 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)

Feb 2019 to May 2020 | **Carnegie Mellon University**
School of Architecture — Manufacturing Futures Initiative (PI: Joshua Bard)

Research Assistant
- Investigated the use of steam-bending and novel joinery to design, prototype, and fabricate steam-bent, wooden swings for a public park in Pittsburgh

Honors & Awards

2024-2028 | **Fontaine Society Fellowship,** University of Pennsylvania

2021 | **GEE! Learning Games Award Finalist,** GEE! Learning Games Awards

2020 | **Askwith Kenner Grant,** CMU Department of Modern Languages

2020 | **Louis F. Valentour Scholarship,** CMU School of Architecture

Publications

In Progress & Under Review

[R.1] **Noh, D. J.**, Fields, D. A., Kafai, Y. B., & Metaxa, D. (Under Review). "You Can Actually Do Something": Shifts in High School Computer Science Teachers' Conceptions of AI/ML Systems and Algorithmic Justice.

Journal Articles

[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. https://doi.org/10.1016/j.ijcci.2025.100769

Conference Publications (Full Papers)

[C.2] **Noh, D. J.** (In Press). Guide on the Side or Sage on the Stage?: Exploring the Relationship between Teachers' Spatial and Verbal Discursive Strategies. *International Conference on Quantitative Ethnography.*

[C.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. https://doi.org/10.1145/3713043.3728849 [Acceptance Rate: 29%]

Conference Publications (Short Papers & Symposia)

[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. https://doi.org/10.1145/3713043.3731525

[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. https://doi.org/10.22318/icls2025.362276

Posters & Presentations

[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). 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). What happens when teens design small generative language models? A case study of teenagers building babyGPTs. *Connected Learning Summit 2025.* Virtual.

White Papers

[WP.1] Gonzalez, P. G., **Noh, D.**, & Wilson, D. (2022). Making the Space for Learning. *Presidents and Fellows of Harvard College. Cambridge, MA.*
Available here: *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 and museum teen interns on the development and facilitation of design-based, hands-on learning experiences

Advising & Mentoring

UG = Undergraduate

Current

University of Pennsylvania
Penn Undergraduate Research Mentoring Program (PURM)

- Lucianne Servat (UG Cognitive Science, 2025-present)
- Elo Esalomi (UG Artificial Intelligence, 2025)

2023-2024

Massachusetts Institute of Technology
MIT Museum + Morningside Academy for Design (MAD)

- Wonuola Abiodun (UG Civil Engineering + Architecture, 2023-2024)
- Alexandra Coston (UG Architecture, 2023-2024)
- Kimberly McPherson (UG Computer Science, 2023)

Service

Conference Reviewing

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

- inter•punct, Editorial Member & Designer (2018-2021)
- AIAS CMU, Public Relations Chair (2019-2020)
- 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)

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

Korean (native), Japanese (novice)

Methods

Thematic Analysis, Interviews, Participatory Design Research, Youth Participatory Action Research, Multi-Modal Learning Analytics (EDA, Gaze Tracking, Pose Tracking), Epistemic/Ordered Network Analysis, Multilevel Modeling