

Hi! I'm Kento Nishi.

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KentoNishi kentonishi.com

A little about me: I was born in Japan, raised in San Jose (CA), and now spend most of my time in Boston/Cambridge (MA). My mantra is "openness": I'm intrinsically motivated to share knowledge and technology with everyone. I'm most interested in bringing transparency to AI's black-box mechanisms via "science of deep learning" and "mechanistic interpretability," as well as open-source software development and teaching.

As for hobbies, I'm an avid long-distance runner (half-marathon PR is 1h25m10s). I also love Formula 1, go-kart racing, trains & transportation infrastructure, anime, vtubers, jpop, and electronic music production. Reach out to me about absolutely anything, anytime!

Education & Employment [LinkedIn]

Harvard University since '22

Bachelor's and Concurrent Master's degree candidate in Computer Science. Class of 2026. GPA: 3.971.

Research Intern, CBS-NTT Physics of Al Group (advised by Dr. H. Tanaka & Dr. E. S. Lubana).

Research Intern, Visual Computing Group (advised by Dr. H. Pfister).

Teaching Fellow, COMPSCI 79 "Design of Useful and Usable Interactive Systems" (by Dr. K. Gajos).

Program Director (Research Compute Lead), Al Safety Student Team.

Comcast Corporation — Applied Artificial Intelligence Research Labs

PhD/MS-level Research Intern, Speech Al Team.

Lynbrook High School

'18-'22

since '25

Valedictorian. Class of 2022. GPA: 4.0 (Unweighted).

Languages: Bilingual Japanese & English. Certificates: NVIDIA Deep Learning Institute "Fundamentals of Deep Learning for Computer Vision," Stanford "Machine Learning." Skills: Python, TypeScript/JS, C++, Java; PyTorch, Svelte, OpenGL.

Publications & Research [Google Scholar, 180+ citations]

ICML 2025, Representation Shattering in Transformers: A Synthetic Study with Knowledge Editing

06 '25

★ First author. Introduced a synthetic framework to show how Knowledge Editing can harm model representations.

ICLR 2025, In-Context Learning of Representations

10 '24

Co-author. Demonstrated how LLMs develop emergent task-specific representations given in-context exemplars.

NeurIPS 2024, Structured In-Context Task Representations

10 '24

Co-author. NeurReps workshop. Predecessor to "In-Context Learning of Representations."

CVPR 2024, Joint-Task Regularization for Partially Labeled Multi-Task Learning

02 '24

★ First author. JTR leverages cross-task relations to improve learning when data is not fully labeled for all tasks.

ICML 2025, Towards an Understanding of Stepwise Inference in Transformers: A Synthetic Graph Navigation Model 02 '24 Co-author. A synthetic task reveals when and why stepwise inference helps autoregressive models plan and reason.

NeurIPS 2023, <u>Stepwise Inference in Transformers: Exploring a Synthetic Graph Navigation Task</u> Co-author. R0-FoMo workshop. Predecessor to "Stepwise Inference in Transformers."

12 '23

CVPR 2021, Augmentation Strategies for Learning with Noisy Labels

06 '21

★ First author. Showed that different strengths of augmentation for loss modeling and learning is most effective.

AAAI 2021, Improving Label Noise Robustness with Data Augmentation and Semi-Supervised Learning

02 '21

★ First author. Student Abstract program. Predecessor to "Augmentation Strategies for Learning with Noisy Labels."

Other Research

Research Fellow, 2024 Harvard Program for Research in Science and Engineering (PRISE).

Invited Speaker, 2022 Forum on Information Technology (FIT) Conference Top Conference Session.

Awards

Ezoe Memorial Recruit Foundation Scholarship Recipient

since '23

One of Japan's most selective scholarship programs (~6 recipients per year).

John Harvard Scholarship: top 5% of the Harvard College class of 2026.

'23 '22

Regeneron Science Talent Search Scholar: top 300 high school student researchers in the United States.

Projects & Libraries

LiveTL: Founding developer of a suite of free/open-source apps for improved broadcasting/viewing of online livestreams (<u>LiveTL</u>, <u>HyperChat</u>, <u>YtcFilter</u>). 100K+ total users, 900+ total stars on GitHub, and 20+ contributors from 10+ countries.

<u>Hololive English Christmas Advent Calendar</u>: Developed <u>holoen-advent.com</u> as an officially commissioned project under Hololive English (<u>Cover Corp</u>). Served over 250K+ unique viewers since 2022.

Torch Pitch Shift: First pitch-shifting Python library with GPU support for ML. 500K+ downloads/month. 135+ stars on GitHub. Developed alongside torch-audiomentations (1.1K+ stars on GitHub).