Kento Nishi

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Education

Harvard College 2022-present
Harvard College Class of 2026. GPA: 3.973. Cambridge, Massachusetts

Lynbrook High School 2018-2022
Class of 2022. GPA: 4.0 (Unweighted). Valedictorian. San Jose, California

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

Joint-Task Regularization for Partially Labeled Multi-Task Learning Feb. 2024
Conference on Computer Vision and Pattern Recognition (IEEE/CVF CVPR 2024)
- Kento Nishi, Junsik Kim, Wanhua Li, Hanspeter Pfister.

Towards an Understanding of Stepwise Inference in Transformers: A Synthetic Graph Navigation Model Feb. 2024
arXiv Preprint
- Mikail Khona, Maya Okawa, Rahul Ramesh, **Kento Nishi**, Robert P. Dick, Ekdeep Singh Lubana, Hidenori Tanaka.

Stepwise Inference in Transformers: Exploring a Synthetic Graph Navigation Task Dec. 2023
Conference on Neural Information Processing Systems (NeurIPS 2023) R0-FoMo
- Mikail Khona, Maya Okawa, Rahul Ramesh, **Kento Nishi**, Robert P. Dick, Ekdeep Singh Lubana, Hidenori Tanaka.
- Paper and poster in the Robustness of Few-shot and Zero-shot Learning in Large Foundation Models workshop.

Augmentation Strategies for Learning with Noisy Labels Jun. 2021
Conference on Computer Vision and Pattern Recognition (IEEE/CVF CVPR 2021) pp. 8022-8031
- **Kento Nishi**, Yi Ding, Alex Rich, Tobias Höllerer.
- Presented a video and poster in the main 2021 CVPR conference. Cited 104 times as of April 2024.

Improving Label Noise Robustness with Data Augmentation and Semi-Supervised Learning Feb. 2021
Association for the Advancement of Artificial Intelligence (AAAI 2021) pp. 15855-15856
- **Kento Nishi**, Yi Ding, Tobias Höllerer.
- Presented a short paper and poster. Predecessor to the CVPR 2021 publication. Cited 4 times as of April 2024.

Other Research
- **Invited speaker** for the 2022 Forum on Information Technology Conference Top Conference Session.
- Browser Extension Standards: How Google Monopolized and Exploited the Web Browser Industry (2022).

Awards

John Harvard Scholarship 2023
Top 5% of the Harvard College Class of 2026 in the 2023 Academic Year.

Ezoe Memorial Recruit Foundation Scholarship Recipient 2023
One of Japan's most selective scholarship programs for student researchers (roughly 6 recipients per year).

Regeneron Science Talent Search Top 300 Scholar 2022
Awarded for thesis titled "Augmentation Strategies for Learning With Insufficient Data."

Projects & Libraries

LiveTL: Co-founding developer of a browser extension and mobile app for TV-like subtitles for online livestreams. 50K+ total users, 500+ stars on GitHub, and 20+ contributors from 10+ countries.
HyperChat by LiveTL: Founding developer of a browser extension for improving the YouTube livestream chat. Integrated into LiveTL. Combined 65K+ users. Endorsed by major streamers on YouTube. 180+ stars on GitHub.
Hololive English Christmas Advent Calendar: Developed holoen-advent.com as an officially commissioned project under Hololive English (Cover Corp). Served 50K+ unique viewers in Dec. 2022 and 140K+ unique viewers in Dec. 2023.
Torch Pitch Shift: First pitch-shifting Python library with GPU support for ML. 100K+ downloads/month. 100+ stars on GitHub. Developed alongside torch-audiomentations (800+ stars on GitHub) with the Asteroid open-source dev team.

Lab/Group Affiliations

Coursework

Harvard College

EXPOS 20 "Expository Writing 20: Privacy and Surveillance," **HISTSCI 1990** "Science @ Work," **MATH 22A** "Vector Calculus and Linear Algebra I," **COMPSCI 61** "Systems Programming and Machine Organization," **COMPSCI 20** "Discrete Mathematics for Computer Science," **COMPSCI 175** "Computer Graphics," **MUSIC 167** "Storytelling with Sounds," **GENED 1133** "Is the US Civil War Still Being Faught?" **STAT 110** "Introduction to Probability," **COMPSCI 120** "Intro to Algorithms and their Limitations," **GENED 1018** "How to Build a Habitable Planet," **COMPSCI 181** "Machine Learning," **COMPSCI 178** "Engineering Usable Interactive Systems," **GENED 1046** "Evolving Morality: From Primordial Soup to Superintelligent Machines," **COMPSCI 91R** "Supervised Reading and Research."

Harvard Graduate School of Arts and Sciences

COMPSCI 271 "Topics in Data Visualization."

Certificates: NVIDIA Deep Learning Institute "Fundamentals of Deep Learning for Computer Vision" (*0f17ae21083b444caf0d60afa0ea8f04*), Stanford Coursera "Machine Learning" (*2A7SM5AGNJFC*).

Skills

Languages: Japanese (native), English (native)
Programming Languages: Python, JavaScript/TypeScript/HTML/CSS, C++, Java, Rust
Technologies: PyTorch, Svelte, Vue, Git, Docker, ssh, VSCode, SQL, TensorFlow, Linux, etc.
GitHub: 1500-day daily commit streak, 20K+ total commits, 140+ pull requests, contributed to 35+ open-source projects
Other Interests: long-distance running, electronic music composition/production, urban planning & transit, Formula 1

Extracurricular Activities

AI Safety Student Team @ Harvard (AISST): Member of the Board (Research Compute Lead, 2023-present). Manager of AISST's GPU resources and participate in weekly technical paper readings on AI alignment and interpretability.
Harvard Japan Society: Tech Chair of the Harvard Japan Society. Responsible for the website and internal IT systems.
LiveTL: Currently lead an international development team for three open-source extensions. LiveTL has 50K users, HyperChat has 17K users, and YtcFilter has 15K users.
San Fransisco Japanese School PTA: Led the development of an all-new library system during COVID (2020-2022).
High School Clubs: Lynbrook Computer Science Club board member (2020-2022), co-president for one year. Lynbrook Machine Learning Club board member (2020-2022), co-president for one year. Lynbrook WebDev board member (2019-2022), president for one year..