

Yuchi Yamaguchi

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Education

Institute of Science Tokyo

— Bachelor of Engineering
School of Computing, Department of Computer Science
Apr 2022 – Mar 2026 (expected)

Research Interests

Machine Learning, Deep Learning Frameworks and ML Infrastructure, Programming Language Design and Implementation, Automated Theorem Proving, Formal Methods

Experience

Nikkei Inc. *Nov 2024–Present*

- Designed data analysis competitions
- Research on Automated Reproducibility Checking of Machine Learning Papers

XICA Inc. *Feb 2023–Apr 2023*

- Re-implemented various algorithms in the data analysis infrastructure to improve performance

DENSO IT Laboratory *Jul 2022–Sep 2022*

- Implemented and evaluated anomaly-detection DNNs for ultra-high-resolution images

Skills

Programming: Python, Julia, C++, TypeScript, Scheme, Rocq

Languages: Japanese (native), English (conversational)

Projects

lapisla-prover – lapisla-prover is a theorem-proving assistance system built around a custom

kernel and integrated package registry to streamline sharing of proofs and results. As leader of a six-person team, I oversaw feature design and contributed to the implementation of both the editor and the kernel. [\[repo\]](#)

JITrench.jl – JITrench.jl is an automatic differentiation library and deep learning framework that incorporates modern features such as define-by-run execution and explicit parameter management. [\[repo\]](#)

Leadership & Awards

Leadership

Data Science Community, Institute of Science Tokyo – Founded and served as president of a student-run data science community. Designed and organized five competitions (two in collaboration with industry partners), and developed teaching materials ([ml-lecture](#)) to educate over 100 freshmen.

Development Team Management – Managed a six-person development team for the lapisla-prover.

Awards

1st Place, National Medical AI Contest – Secured 1st place out of 51 teams in an ECG-based myocardial infarction detection challenge at the 88th Annual Scientific Meeting of the Japanese Circulation Society.

Google Summer of Code 2025 – Selected for Google Summer of Code 2025 to develop a new Language Server for Julia. (8% acceptance rate). [\[Project page\]](#)

Last updated: May 14, 2025