

SHOGO NOGUCHI

AI Research / Machine Learning Engineering | New graduate candidate | Japan

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EDUCATION

The University of Tokyo — Master's student, Graduate School of Interdisciplinary Information Studies (GSII), Advanced Art and Design Course, Kamijo Laboratory | Apr 2026–Present

Gunma University — B.Eng., School of Science and Technology, Electronics and Informatics Program | Apr 2022–Mar 2026 | GPA: 4.16/4.30 | Graduation representative

RESEARCH / WORK EXPERIENCE

Sony Computer Science Laboratories, Inc. — Research Assistant, Mind Music Project / Research Activation Group — Feb 2025–Mar 2026

- Led a first-author project on music identification from electroencephalography (EEG) signals recorded during listening; handled learning-target design, PyTorch training/evaluation, paper writing, and public release.
- Trained Transformer encoders for EEG signals with sound-feature and musical-expectation learning targets; achieved 0.859 best single-model accuracy and 0.887 three-model ensemble accuracy on NMED-T song identification.
- Participated in weekly English/Japanese technical discussions with members from Japan, the United States, and China.
- Completed technical screening involving LaBraM reproduction, SEED-V preprocessing, Muse2-style low-electrode simulation, and a mathematical improvement proposal.

SELECTED RESEARCH OUTPUTS

- Music identification from electroencephalography (EEG) signals during listening — first-author arXiv preprint, 2026 | Paper: arxiv.org/abs/2603.03190 | Role: task formulation, learning-target design, model training/evaluation, writing, release.

Structure-preserving scene generation for autonomous-driving data augmentation — B.Eng. thesis project | Depth RMSE 33.02→27.77; Object Preservation F1 0.0889→0.1071 | Released six trained model weights.

TECHNICAL SKILLS

- Machine learning: PyTorch, PyTorch Lightning, Transformer encoders, masked prediction, representation learning, foundation-model training concepts, diffusion models, ControlNet, multimodal learning, ablation / multi-seed evaluation.
- Data and evaluation: electroencephalography (EEG) preprocessing, audio feature extraction, NMED-T song-identification evaluation, Waymo image-generation evaluation, semantic / depth / edge / object-preservation metrics, vision-language model (VLM) assisted prompt generation.
- Engineering: Python, Linux/Ubuntu, Docker, CUDA, NVIDIA RTX A6000 / RTX 5090 environments, Git/GitHub, Hugging Face, GitHub Pages, HTML/CSS/JavaScript (DOM, localStorage, i18n UI, command palette).

AWARDS / CREDENTIALS

- JSME Hatakeyama Award, Mar 2026 | Gunma University graduation representative, Mar 2026 | President-certified full tuition exemption, Gunma University, Oct 2025
- TOEIC Listening & Reading Test: 895, Apr 2024 | TOEFL iBT Test: 74, Mar 2024 | Ordinary Motor Vehicle Class 1 Driver's License, Aug 2022
- Academic transcripts and score certificates: available upon request.