

TAIGO SAKAI

PH.D. STUDENT | COMPUTER VISION RESEARCHER

Meijo University, Nagoya, Japan | 263441505@ccmailg.meijo-u.ac.jp | sakai1250.github.io

RESEARCH AREAS

Continual Learning
Long-Tailed Learning
Multi-View Detection & Tracking
Deep Learning for Medical Imaging

TECHNICAL SKILLS

Python / PyTorch
Deep learning research and experimentation
OpenCV / Computer Vision
Detection, tracking, image analysis
Linux / Git / GitHub
Research infrastructure and reproducible development
iOS / Web Development
Prototype and application development

WEB & SOCIAL

Portfolio
GitHub - sakai1250
Google Scholar
LinkedIn - sakai1250

CERTIFICATIONS

JDLA Deep Learning Engineer
Japan Deep Learning Association - 2024
Third-Class Electric Chief Engineer
Japan - 2023

SUMMARY

Ph.D. student at Meijo University working on computer vision and continual learning. Research interests include long-tailed learning, dynamic neural capacity, and robust multi-view pedestrian detection and tracking. Author of peer-reviewed international publications and recipient of multiple research and engineering awards.

EXPERIENCE

Special Assistant

Meijo University - Apr. 2026 - Present

Researcher / Graduate Student

Hotta Laboratory, Meijo University - 2023 - Present

EDUCATION

Ph.D. Course, Electrical, Electronic, Information and Materials Engineering

Meijo University Graduate School - Apr. 2026 - Present

Master's Course, Electrical and Electronic Engineering

Meijo University Graduate School - Apr. 2024 - Mar. 2026

B.E., Electrical and Electronic Engineering

Meijo University - Apr. 2020 - Mar. 2024

PUBLICATIONS

INTERNATIONAL CONFERENCES & WORKSHOPS - PEER-REVIEWED

T. Sakai, K. Hotta

NeuroGuard: Neural Gradient Update Aware of Representation Damage

ECCV 2026 Workshop on Human-inspired Computer Vision - Oral

K. Toida, T. Sakai, T. Nakamura, H. Shimizu, K. Hotta

ATLASFusion: Aggregation Tracking with Location-Aware Sparse Fusion for Robust Spatio-Temporal Multi-View Pedestrian Tracking

ECCV 2026 Workshop on Computer Vision for Multimedia Spatial Intelligence through Time - Poster

T. Sakai, K. Hotta

Dynamic Distillation and Gradient Consistency for Robust Long-Tailed Incremental Learning

ICIP 2026 - Poster

T. Sakai, K. Hotta

Improving Noise Robustness in Medical Image Classification via Dynamic Integration of CNN and KAN

CARS 2026 - Poster

T. Sakai, T. Nakamura, H. Shimizu, K. Hotta

Visibility-Gated ConvGRU for Robust Multi-View Pedestrian Detection and Tracking in BEV Space

VISAPP 2026 - Oral

T. Sakai, K. Hotta

Long-Tailed Data Classification by Increasing and Decreasing Neurons During Training

ICCV 2025 Workshop on Human-inspired Computer Vision - Poster

T. Sakai, K. Hotta

Growing Deep Neural Network Considering with Similarity between Neurons

ECCV 2024 Workshop on Human-inspired Computer Vision - Poster

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HIGHLIGHTS

18 research outputs

7 international + 11 domestic

DIA2026 Encouragement Award

3 / 96 presentations

ViEW2025 Algorithm Contest

1st / 131 entries

MIRU2025 Student Encouragement Award

55 / 726 submissions

ACADEMIC SERVICE

Technical Program Committee

ECCV 2026 Human-inspired Computer Vision Workshop

Technical Program Committee

ICCV 2025 Human-inspired Computer Vision Workshop

AWARDS & GRANTS

IEICE Tokai Branch

Student Research Encouragement Award - 2026

DIA2026

Encouragement Award - 3/96

ViEW2025 Algorithm Contest

First Prize - 1/131

MIRU2025

Student Encouragement Award - 55/726

Meijo University

President's Award - 2023, 2024, 2025

IPSJ CVIM

Best Bachelor's Thesis Session Award - 2024

LINE Yahoo HackU

Grand Prize - 2023 / HappyHacking - 2023, 2025

JASSO

Outstanding Achievement Repayment Exemption - 2026

Rinnai Scholarship Foundation

Scholarship Student - 2026

PUBLICATIONS

DOMESTIC CONFERENCES & SYMPOSIA

T. Sakai, K. Hotta

Medical Image Classification with MedViTV2-KAN Using Rational Function Bases

FIT 2026, Fukuoka - Oral

T. Sakai, K. Hotta

Gabor-KAN: Kolmogorov-Arnold Networks with Complex Gabor Wavelets for Medical Image Classification

MIRU 2026, Nagasaki - Peer-reviewed Poster

T. Sakai, T. Nakamura, H. Shimizu, K. Hotta

Visibility-Gated ConvGRU for Robust Multi-View Pedestrian Detection and Tracking in BEV Space

DIA 2026, Kochi - Peer-reviewed Oral

T. Sakai, K. Hotta

Improving Noise Robustness in Medical Image Classification via Dynamic Integration of CNN and KAN

JSMBE Tokai Branch Meeting 2025, Aichi - Oral

T. Sakai, K. Hotta

Gradient Consistency Regularization and Dynamic Knowledge Distillation for Continual Learning on Imbalanced Data

MIRU 2025, Kyoto - Peer-reviewed Oral

S. Kamiya, T. Sakai, H. Kojima, K. Kuchitsu, T. Tomoi, K. Hotta

Tip Tracking of Marchantia Rhizoids from Limited Labeled Data

DIA 2025, Fukui - Peer-reviewed Poster

T. Sakai, T. Yonekura, K. Hotta

Unsupervised Arabidopsis Tip Tracking Using SAM2 and Mask Skeletonization

IPSJ National Convention 2025, Osaka - Oral

K. Toida, T. Sakai, et al.

Improving Multi-Object Tracking Accuracy Using Multiple Views

SSII 2025, Tokyo - Peer-reviewed Poster

T. Sakai, K. Hotta

Long-Tailed Data Classification by Increasing and Decreasing Neurons During Training

ViEW 2024, Kanagawa - Peer-reviewed Poster

T. Sakai, K. Hotta

Image Classification with Deep Neural Networks Considering Neuron Similarity

Tokai-Section Joint Conference 2024 - Oral

T. Sakai, K. Hotta

Growing Deep Neural Network Considering the Distribution of Neuron Similarity

IPSJ CVIM 2024 Bachelor Thesis Session - Oral