Satoru Akita

✉ wwlap24@gmail.com 📞 +81-70-4157-2275 🔗 satoru-akita-6070a4145 ⌂ wwlapaki310

SKILLS

Languages: Python, C/C++, TypeScript, JavaScript, Bash

ML / AI: PyTorch, TensorFlow, OpenCV, MediaPipe, Computer Vision, 3D sensing

Cloud & Infrastructure: Azure, AWS, GCP, Docker, CI/CD, MLOps pipelines

Specialization: Edge-Cloud hybrid systems, Distributed architecture, Data structures & algorithms

Soft Skills: Solution Scoping & Feasibility Analysis, On-site Technical Diagnostic & Requirement Engineering, Hardware-Software Integration Strategy, Technical event operations

EDUCATION

M.S. in Robotics
Tohoku University, 2017–2019

MEMS sensors, semiconductor processes, data utilization, machine learning

B.S. in Mechanical Engineering
Tohoku University, 2013–2017

Robot contests, Programming work (particle simulation with C++ & OpenGL), Aerospace/Genetic/Control engineering

CERTIFICATIONS

Google Certified Professional - Cloud Architect

TensorFlow Developer Certificate

AWS Solutions Architect - Associate

Azure AI Engineer Associate

Registered Information Security Specialist

EXPERIENCE

AI Solutions Architect | Sony Semiconductor Solutions, Tokyo — Jan 2023 – Present

- **Led development and OSS publication of 9 AITRIOS sample applications**, showcased in 2 exhibitions, 3 national project demos, and 5+ enterprise technical briefings, serving as reference implementations for enterprise AI development
- **Architected and deployed edge–cloud pilot systems** using AITRIOS-compatible cameras (including IMX500), designing NAS storage, PoE switching, LTE connectivity, and secure remote access architectures
- **Designed and deployed multi-camera edge AI systems across 12 customer deployments**, including 30-camera distributed architectures (3 environments), 10-camera vehicle detection systems (4 deployments), 8-camera shelf monitoring systems (2 deployments), and 2-camera truck cargo monitoring systems (3 deployments)
- **Developed AITRIOS MCP server prototype** and demonstrated LLM-assisted API migration (V1→V2), **automating ~80% of repetitive code updates** through structured prompt engineering

Edge AI Embedded Engineer | Sony Semiconductor Solutions, Tokyo — Jan 2020 – Dec 2022

- **Developed IMX500 SDK and application demos** as a first-generation Edge AI engineer, **supporting enterprise technical adoption** of Sony's inaugural AI image sensor
- **Designed and operated full-stack on-premise camera systems**, conducting circuit reviews, SoC research, hardware validation, and deployment support

Computer Vision / ML Engineer (3D Sensing) | Sony Semiconductor Solutions, Tokyo — Apr 2019 – Dec 2019

- **Pioneered internal ToF ML use case**, independently building **46-class sign language recognition system (98% accuracy, 15 FPS)**; designed depth + facial landmark fusion pipeline from data collection to deployment
- **Led ML development for ToF + RGB 3D pose estimation system** showcased at CES

AWARDS & PUBLICATIONS

SecHack365 (2019)
NICT-sponsored 1-year security hackathon program. Built Fasttext AI to visualize emotional transitions from Twitter posts. Selected for SXSW (Austin) and won an award at the on-site hackathon.

Grand Prize, BIOMOD 2015
International biomolecular design competition, Harvard University

Third Prize, iCAN'14
Global embedded systems competition - Developed earthquake-responsive bookshelf divider system

Published Papers:
Froemel, J., Akita, S., et al. (2020). Micromachines (MDPI)
Uchida, T., Akita, S., et al. (2017). Small (Wiley)

LEADERSHIP

Founding Member
Whole Brain Architecture Young Researchers (Tohoku Chapter, 2018)

SW Conference/Event Operations
SRE NEXT, Open Source Summit Japan, SecHack365

Gemini API Hackathon
Mentor in collaboration with Google AI Student Ambassadors