

Gakuto Sasabe

☎ +33 07-45-04-92-62 | ✉ gakuto0122@gmail.com | 🏠 <https://gakutosasabe.github.io/pages/> | 📄
github.com/gakutosasabe | 🐦 @gakuto66



Personal Profile

Gakuto Sasabe received his B.E. in Electrical and Electronic Engineering from the Tokyo University of Agriculture and Technology, and his M.E. in Information Technology from the Tokyo Institute of Technology in 2018 (supervised by Prof. Yoshihiro Miyake). He worked at Panasonic Corporation as a Software Engineer for six years, where he developed embedded software for automated dish-serving systems and designed user interfaces for semiconductor manufacturing equipment. After working as a freelance engineer, he is now pursuing a Master's degree in Design at the Université de Technologie de Compiègne (UTC). His interests lie in combining AR/VR technologies, electrical engineering, cognitive psychology, and human-centered design to augment human capabilities and support habit formation.

Education

User Experience Design, université de technologie de Compiègne
MASTER OF DESIGN.

Compiègne, France
Sep 2025 - Present

School of Computing, Tokyo Institute of Technology
MASTER OF ENGINEERING.

Tokyo, Japan
Apr 2016 - Mar 2018

- Supervisor: Prof. Dr. Yoshihiro Miyake
- Thesis: Increasing walking stride and speed by synchronization with avatar walking using mixed reality

Department of Electrical and Electronic Engineering, Tokyo University of Agriculture and Technology
BACHELOR OF ENGINEERING.

Tokyo, Japan
Apr 2011 - May 2016

- Supervisor: Prof. Dr. Hitoshi Kitazawa
- Thesis: Research on analysis methods for temporal signal changes in moving object detection.

Work Experience

Full-stack Engineer
Freelance

Tokyo, Japan
Jun 2024 - present

- Developed backend features for a Tesla car-rental service, designing and implementing Cloud Function APIs for a Swift-based application on Google Cloud Platform.
- Planned and developed a web application designed to improve study habits for middle-school students and their parents, covering the project from concept to implementation.
- **Skills:** Typescript, Google Cloud Platform, Prisma, Vue.js, Javascript, Python, Miro

Semiconductor Equipment Software Engineer
Panasonic Connect Co., Ltd.

Osaka, Japan
Sep 2019 - Dec 2023

- Designed and developed equipment UI using VB.NET, WPF and AdobeXD
- Created and implemented control programs with TwinCAT
- Improved development efficiency using Jira, Markdown, and Subversion
- **Skills:** VB.NET, WPF, TwinCAT, UML, Object oriented design, UI design, Subversion, AdobeXD, Git, Jira, Markdown, Teamwork, Time Management, Communication, Presentation skills.

Embeded Software Engineer
Panasonic Connect Co., Ltd.

Osaka, Japan
Apr 2018 - Aug 2019

- Developed an automated dish-serving system for a Chinese restaurant.
- Programming industrial robots for Mitsubishi Heavy Industries.
- **Skills:** PLC programming, Robot programming
- **Soft Skills:** Teamwork, Time Management, Communication, Presentation skills.

University Projects

Increasing walking stride and speed by synchronization with avatar walking using mixed reality

Tokyo, Japan

School of Computing, Tokyo Institute of Technology

Apr 2016 - Apr 2018

- Developed a system to present a 3D avatar synchronized with the user's walking rhythm using HoloLens.
- Unlike previous studies using auditory or timing cues, we presented the actual gait.
- Provided two avatar types: normal walking and exaggerated arm and leg movements.
- Evaluated changes in walking speed and stride length while users viewed each avatar.
- Results showed significant increases in walking speed and stride length for users viewing the exaggerated movement avatar.
- **Technical Skills:** C#, Unity, Statistics, R, Psychological experiment design
- **Soft Skills:** Time Management, Teamwork, Presentation skills, Report writing.

Research on analysis methods for temporal signal changes in moving object detection.

Tokyo, Japan

Tokyo University of Agriculture and Technology

Apr 2010 - Mar 2011

- Conducted temperature data clustering using DTW, RealAdaboost, and SVM for time series machine learning.
- Detected motion based on luminance time series data from video at specific coordinates.
- Created two waveforms: one connecting monotonically increasing to decreasing data, and the other from decreasing to increasing data.
- The segmented waveform width enabled more detailed motion detection compared to single Gaussian distribution methods.
- **Technical Skills:** C++, Machine learning, Image recognition, Latex
- **Soft Skills:** Time Management, Teamwork, Presentation skills, Report writing.

Skills

Programming	Python (Pandas, PyTorch, NumPy, Scikit-learn. etc.), R, CSharp, Unity, OpenCV, Javascript,Vue.js, Arduino, PLC, TwinCAT
Design	Adobe XD, Figma, Fusion360
Miscellaneous	Linux, 囲碁, Microsoft Office, Git, Jira.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation, Presentation.
Qualification	Fundamental Information Technology Engineer Examination, Applied Information Technology Engineer Examination

Achievements

2019	Sponser Award , GUGEN 2019(Hardware Contest GUGEN)	Japan
2018	CNS Golden Award , CNS Golden Award(Panasonic Connect Co., Ltd.)	Japan

Publications

JOURNAL ARTICLES

Spatiotemporal Gait Guidance Using Audiovisual Cues of Synchronized Walking Avatar in Augmented Reality
Dane A. L. Miller, Taiki Ogata, Gakuto Sasabe, Liang Shan, Nozomi Tsumura, Yoshihiro Miyake
IEEE Access 10 (2022) pp. 90498–90506. 2022

CONFERENCE PRESENTATIONS

Development of a device that automatically adjusts the gain of specific keywords that appear in speech.

Shunichi Amano Gakuto Sasabe

23th Society of Instrument and Control Engineers System Integration Division Lecture (SI 2022), 2022, Chiba, Japan

Walking assist system utilizing the mirroring effect of visual information by mixed reality

Yoshihiro Miyake Gakuto Sasabe

30th SICE Symposium on Decentralized Autonomous Systems, 2018, Aichi, Japan

Interests

Reserch	Human Augmentation, Human Computer Interaction ,cognitive phycology,ghost engineering, Embodied cognition, AR/VR/MR
Maker	He publish DIY electronics projects for a general audience and have presented my work at Maker Faire Japan on three occasions.
Technical Writing	I write descriptive blogs about my creation and reserch on my GitHub
Reading Books	I like to read about body extension research, philosophy and art.