



Hibiki Shimizu

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EDUCATION

University of Warwick

M.S. Computer Science

October 2025 - Expected September 2026

Osaka Institute of Technology

Bachelor of Information Science and Technology

April 2021 - March 2025

PROJECTS

Lip-Reading Model (dlib Landmark-based VSR)

- Developed an end-to-end **lip-reading** pipeline in **Python** to recognise spoken words from silent video using the **Oxford-BBC LRW dataset**.
- Extracted 68 facial landmarks per frame with **dlib** and engineered a mouth-landmark representation, converting each clip into a $29 \times 20 \times 2$ tensor with scale normalization to reduce speaker variability.
- Trained and evaluated an **LSTM**-based multi-class classifier with a **softmax** output layer, visualised learning curves and exported the trained model in .h5 format for inference.

Gesture-Controlled Morse Code Converter

- Developed a **real-time Morse code** input system using **Python**, **OpenCV**, and **MediaPipe**, converting **hand gestures** into dots, dashes, and spaces to generate text outputs.
- Built an on-screen interface overlaying the detected gesture, duration, current Morse sequence, and converted text for live user feedback.

ACTIVITIES

International Collaborative Project *Thammasat University*

August 2023 - September 2023

- **Project Lead:** Led a student team to design and develop a gesture-controlled Morse code converter during a 2023 exchange program.
- Proposed the project concept with a social impact focus and drove the end-to-end process from requirements to system design and implementation.
- Coordinated collaboration with local students, managing task allocation, progress tracking, and final demo delivery.

Interactive Computer Vision Installation *Campus Festival Project*

November 2023

- Built a real-time webcam-based interactive system in Python using **OpenCV** and **MediaPipe** Pose Landmarker.
- Implemented landmark-driven interaction by detecting user actions within a target region and triggering visual state changes.
- Added audio feedback and real-time animation effects to support a live demonstration environment.

Occupational Health Professional Matching Platform *Full-Stack Web App Development*

June 2025 - December 2025

- Built a PHP/MySQL web application to match companies with independent occupational health professionals, with multi-criteria search, a responsive UI, and map-based filters.
- Designed the database schema and backend search APIs, and added profile-based ranking to improve result quality.
- Implemented secure authentication and admin features, including CSRF protection, password hashing, and a token-based password reset with rate limiting.

TECHNICAL SKILLS

- **Languages:** Python, C, Java, SQL, PHP, JavaScript
- **Web:** HTML/CSS, Apache(.htaccess)
- **ML/CV:** TensorFlow, Keras, scikit-learn, OpenCV, MediaPipe, dlib
- **Tools:** XAMPP
- **Database:** MySQL

CERTIFICATIONS

- Level 2 Digital Communications Certification, Japan Data Communications Association, Government-recognised Certification, Japan, December 2019
- Fundamental Information Technology Engineer Examination, IPA, National-level examination, Japan, June 2024
- IELTS Academic: Overall 7.0, July 2025