

Wenying Jia

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Helsinki, Finland

EDUCATION

- Aalto University** 08/2024–07/2026
Master of Science (Technology) Espoo, Finland
 - Master's Programme in Computer, Communication and Information Sciences
 - Major: Computer Science, with additional studies in Communications Engineering
 - Thesis: *Development of a Multimodal Vision–Tactile Sensing and Classification System*, grade: 5 / 5
 - GPA: 4.95/5; Graduated with Honours
- University of Helsinki** 08/2022–07/2025
Bachelor of Science Helsinki, Finland
 - Bachelor's Programme in Mathematical Sciences
 - Major: Mathematics
 - Thesis: *Mathematical Analysis of Volterra Integral Equations*, grade 5/5
 - GPA: 4.97/5; Graduated with Honours
- Aalto University** 08/2021–07/2024
Bachelor of Science (Technology) Espoo, Finland
 - Bachelor's Programme in Electrical Engineering
 - Major: Information Technology
 - Thesis: *Wi-Fi 7 Analysis: Overview and Comparison with Previous IEEE 802.11 Standards*, grade 5/5
 - GPA: 4.5/5; Graduated with Honours

RESEARCH AND RELEVANT WORK EXPERIENCE

- Aalto University** 10/2025–Present
Research Assistant Espoo, Finland
 - Conducting research on intelligent and neuromorphic multisensory systems, with a focus on multimodal sensing
 - Developing multimodal vision–tactile sensing hardware and software through embedded programming, sensor integration, synchronized data acquisition, and experimental system prototyping
- Aalto University** 09/2025–12/2025
Digital Assistant Espoo, Finland
 - Produced tutorial materials for the Smart Wearables I-II courses
 - Covered textile antenna and pressure sensor embroidery, textile-based energy harvester fabrication, tensile testing and cyclic analysis of strain sensors, and integration of textile sensors and energy harvesters into fabrics
- University of Helsinki** 06/2025–07/2025
Software Development Intern Helsinki, Finland
 - Implemented web-based features for massive open online courses (MOOCs)
 - Contributed to the development of an AI-powered chatbot for online learners using React, TypeScript, Node.js, Git, and a Linux-based development environment
- Aalto University** 12/2023–04/2024; 01/2025–04/2025
Course Assistant Espoo, Finland
 - Assisted in course development, guided students, reviewed calculation exercises, and supported exam evaluation

SELECTED PROJECTS

- **FlowUp: Physiological Sensing Smart Garment** 09/2025–12/2025
Technical focus: textile-based sensing, physiological signal processing, wearable prototyping
 - Led the development of a smart garment that detects breathing patterns and muscle activity as inputs to an interactive platform supporting physical mindset practices
 - Combined textile-based sensing, physiological interaction, human-centered design, technical prototyping, and prototype testing
- **DriveSense: Gesture-Recognizing Smart Glove** 01/2025–05/2025
Technical focus: textile-based sensing, wireless communication, gesture recognition, machine learning
 - Developed a textile-based smart glove for real-time gesture recognition and in-vehicle interaction
 - Contributed to textile-based soft sensor fabrication, circuit and sensor design, wireless communication, data collection and processing, machine-learning model training, user interface design, and prototype testing
- **Autonomous Drone Fleet Simulation and Prototype** 09/2024–01/2025
Technical focus: autonomous systems simulation, Unity/C#, sensor integration, object detection
 - Developed a multi-drone simulation and demonstration prototype for autonomous coordination, object detection, monitoring, and response scenarios near critical infrastructure
 - Contributed to Unity-based multi-vehicle simulation, embedded programming, sensor integration, prototype assembly, radar visualization, and machine-learning-based object detection
- **Pandabot: Voice-Responsive Autonomous Robot** 01/2023–12/2023
Technical focus: speech recognition, ultrasonic sensing, servo control, embedded robotics
 - Developed a panda-shaped interactive robot capable of responding to voice commands and performing autonomous movements
 - Contributed to speech recognition, ultrasonic sensing, servo actuation, sensor and actuator integration, circuit design, embedded control, and 3D-modeled and printed frame components

RELEVANT SKILLS

- **Programming and development:** Python, C/C++, MATLAB, R, Git, Linux
- **Machine learning and perception:** PyTorch, scikit-learn, NumPy/SciPy, pandas, signal processing, time-series classification, neural networks, computer vision, multimodal learning, statistical modeling
- **Embedded systems and electronics:** Arduino, Processing/Java, circuit design, sensor fabrication and integration, servo control, Fritzing, KiCad, LTspice
- **Design, fabrication, and prototyping:** 3D modeling and 3D printing, OpenSCAD, Ultimaker Cura, PrusaSlicer, tactile/textile sensor fabrication, wearable prototyping, experimental testing
- **Languages:** Mandarin Chinese: native; Finnish: near-native; English: fluent; Swedish and German: limited working proficiency

SELECTED HONOURS AND AWARDS

- **Dean's Incentive Scholarship** 2021–2026
Aalto University School of Electrical Engineering and School of Science
- **Best Design Award, top-voted course project in Smart Wearables** 04/2025
Aalto University School of Electrical Engineering, Department of Information and Communications Engineering
- **2nd Place, Student Network Challenge Hackathon: Next Gen Drone Solution** 01/2025
Nokia, Elisa, and Microsoft
- **2nd Place, Teknologia 23 Amazing Robots Contest** 11/2023
Finnish Society of Information Technology and Electronics (TiES)
- **1st Place, ISLP Finnish National Competition** 06/2023
International Statistical Literacy Project (ISLP), Statistics Finland, Finnish Statistical Society
- **"Sähkössä on ideaa" Award (Innovation in Electricity Award)** 12/2022
Ulla Tuominen Foundation, Aalto University School of Electrical Engineering

ACADEMIC ACTIVITIES AND SERVICE

- **Workshop Volunteer** 10/2025
Open Otaniemi, Aalto University; Mobile Cloud Computing Group / Wearable Systems Lab
 - Assisted in hosting a workshop demonstration on building simple wearable circuits using conductive yarn, snap buttons, and LEDs
- **Student Volunteer and Participant** 10/2025
UbiComp / ISWC 2025 International Conference on Ubiquitous, Pervasive and Wearable Computing
- **Volunteer** 09/2025
UCPAE 2025 Europe Forum, United Chinese Professional Associations in Europe