

Zheyun Shou

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PROFILE

AI and machine learning engineer working on noisy time-series and sensor data, from experiment design through to models running in production.

SKILLS

Programming: Python, SQL, C++

ML & data: PyTorch, scikit-learn, NumPy, pandas, time-series classification (ROCKET, catch22), signal processing, representation learning, deep generative models

LLM systems: LangGraph agents, MCP, RAG with hybrid retrieval, LLM agent harnesses (tool calling, guardrails, graders), multi-model routing

Infrastructure: Git, CI/CD, GCP, Azure, Docker

Spoken languages: Chinese (native), English (fluent), Swedish (conversational)

WORK EXPERIENCE

Summer Intern, Xylem

June 2026 — Aug. 2026

- Assessed data quality across large-scale industrial IoT sensor streams and built the feature extraction pipeline for equipment fault forecasting.
- Developed and evaluated predictive ML models for fault detection.

AI Software Engineer, Hapticlabs (part-time)

Nov. 2025 — Present

- Developed signal conversion pipelines for generating controllable haptic output from audio and other haptic inputs.
- Designed a text-to-haptic generation system on top of LLM APIs, constraining free-form natural language into a validated haptic parameter schema.
- Contributed to frontend development of the haptic application. Owned deployment workflow: version control, automated testing, and CI/CD.

Research Engineer, KTH Royal Institute of Technology

June 2025 — Jan. 2026

- Built and benchmarked time-series classification models on noisy, multi-channel sensor data, focusing on how performance degrades under distribution shift between data sources.
- Reduced inference cost using feature-pruned ROCKET variants while retaining cross-dataset accuracy.

Research Assistant, Zhejiang University

Jan. 2022 — Jan. 2023

- Conducted research on reinforcement learning for motion control of the Jueying quadruped robot. Developed robust control strategies and evaluated policy stability under perturbed conditions.

EDUCATION

MSc in Systems, Control and Robotics

Sept. 2023—Aug. 2025

KTH Royal Institute of Technology

Thesis: Computationally Efficient and Generalizable ML Algorithms for Seizure Detection from EEG

B.Eng. in Control Science and Engineering

Sept. 2020—June 2024

Zhejiang University

Thesis: Computer Vision-Based PCB Defect Detection System

Exchange program, National University of Singapore (Aug. 2022)

PUBLICATIONS

Z. Shou, E. Fransen, G. Uribarri. “Computationally Efficient and Generalizable Machine Learning Algorithms for Seizure Detection from EEG Signals.” *NeurIPS 2025 Workshop on Time Series for Health (TS4H)*, 2025.

PROJECTS

Course Projects, KTH Royal Institute of Technology

Sept. 2023 – Aug. 2025

- Applied Estimation:** Implemented a particle filter from scratch for non-linear state estimation, tracking object trajectories and orientations from noisy visual sensor data.
- Social Robotics:** Built a multimodal fusion pipeline combining audio (speech) and visual (facial expression) streams for real-time emotion recognition on a Cozmo robot.