Praruj Thapa

ML & AI Engineer

Osaka, Japan | thapa.praruj@gmail.com | github.com/Praruj | linkedin.com/in/praruj-thapa | prarujthapa.com.np

PROFESSIONAL SUMMARY

ML & AI Engineer building production systems that turn noisy industrial sensor data into decisions people can trust — often days before something breaks. Background spans time-series ML, locally-hosted LLM deployment, and full-stack delivery with FastAPI and Streamlit. Bilingual in English and Japanese.

SKILLS

Languages & Tools: Python, MySQL, Git

ML & Backend: PyTorch, Scikit-learn, FastAPI, Streamlit, NumPy, Time Series Analysis, Local LLM Fine-Tuning

Computer Vision & Hardware: OpenCV, Arduino, Raspberry Pi

WORK EXPERIENCE

ML & Software Developer フクシマガリレイ株式会社 (Fukushima Galilei Co., Ltd.), Osaka *Jun 2025 — Present*

- Enabled proactive maintenance decisions, as measured by detecting equipment anomalies 3–4 days before failure, by designing and deploying a time-series ML pipeline now used daily in production across multiple equipment types.
- Made ML forecasts immediately actionable for analysts, as measured by converting raw predictions into plain-language guidance used in daily decisions, by fine-tuning and deploying a locally-hosted LLM on internal domain knowledge.
- Put fault-detection models directly into non-technical colleagues' hands, as measured by adoption across the team's daily workflow, by building the full FastAPI, Streamlit, and MySQL delivery stack end-to-end.

Production Engineer (Intern) Fukui Megane (Essilor Luxottica), Fukui *Sep 2023*

- Improved production data quality, as measured by more accurate BOM records and routing data, by applying data-driven problem solving to BOM management and interplant communication.

PROJECTS

World Cup 2026 Prediction Engine Personal *2026*

- Correctly predicted the tournament's outcome, as measured by a Brier score of 0.178 against the actual Final result (vs. 0.25 for a coin-flip baseline), by building an Elo-based match model with Monte Carlo tournament simulation.
- Made the model's reasoning verifiable and explorable by others, as measured by a public, live interactive demo, by shipping a React front-end alongside the open-sourced model on GitHub.

Smart Showcase Management System 3rd-Year University Project, with フクシマガリレイ株式会社 *2023–2024*

- Directly influenced my hiring outcome, as measured by leading to a full-time offer at the partner company, by designing a real-time shelf-monitoring system on Raspberry Pi and OpenCV with automated LINE Notify alerts.
- Earned formal recognition from an industry partner, as measured by being featured in フクシマガリレイ's official company project report, by delivering a working computer-vision prototype as a 3rd-year university project.

Automated Container Mechanism (Capstone) 4th-Year Capstone Project, with Shimadzu Corporation *2024–2025*

- Achieved near-fully reliable mechanical operation, as measured by a success rate above 90% across trials, by engineering an automated container-opening mechanism combining SolidWorks CAD design, Arduino control, and multi-sensor feedback.
- Optimized system speed without sacrificing reliability, as measured by sub-3-second cycle times in over 90% of trials, by iterating on servo-motor timing and IR/electromagnet sensor calibration.

CERTIFICATIONS

AWS Cloud Quest: Generative AI Practitioner — AWS Training & Certification, Aug 2026

EDUCATION

Kyoto University of Advanced Science B.E., Electrical & Mechanical Systems Engineering *2021 — 2025*

DAV College, Nepal High School Certificate *2017 — 2019*

LANGUAGES

English (Fluent) · Japanese (Fluent)