

Kuan-Cheng (James) Ku

📍 Taipei, Taiwan ✉️ ruby0322@ntu.im 📞 0983-588-092 🌐 rubytech.dev in James Ku 📧 ruby0322

Education

National Taiwan University *Master in Information Management* *Feb 2026 – Present*

National Taiwan University *Bachelor in Information Management (3.88 GPA)* *Sep 2021 – June 2025*

- Key courses include Web Programming, Deep Learning, Information Retrieval & Text Mining, Cloud Native Application.
- Organized and led multiple large-scale events with 100+ participants, managing cash flows totaling nearly 1M NTD.
- Taught 1000+ students across NTU, high schools and NPO in programming, fullstack, ML, systems design, calculus, etc.

Work Experience

Research Assistant, National Taiwan University Hospital 📄 [Journal Article](#) 📄 [GitHub](#) *Jan 2026 – Present*

- Led end-to-end machine learning and software development for a peritoneal dialysis exit-site infection screening project under NTUH's pre-filed Taiwan patent framework (M678111), deployed to support 400+ PD patients at NTUH.
- Trained a 97% accuracy MobileNetV3 infection risk classifier with transfer learning and class reweighting, and added a CLIP + linear-probe exit-site compliance pre-screen to reject non-compliant images before inference.
- Developed a LIFF-based patient application for guided medical image capture and automated infection risk screening, and built a dashboard for nursing staff to review model predictions, track suspected cases, and support follow-up decisions.
- Designed and operated a self-hosted, MLOps-oriented architecture using Docker, FastAPI, PostgreSQL, and seaweedfs (an open-source S3-compatible object storage) for reproducible deployment and persistent data management.

Research Development Intern, Microsoft Taiwan *TSMC OnePlatform Team, ISD* *Apr 2025 – Jan 2026*

- Implemented an agentic workflow that converted MS Teams Facilitator meeting notes and mockup images into structured Azure DevOps (ADO) test cases, and transformed exported ADO test results into reusable user-manual chunks.
- Led e2e testing from design to acceptance, executing 400+ test cases and coordinating QA-client validation.
- Identified 150+ bugs, built frontend analysis POC, and led cross-vendor meetings to accelerate bug resolution.
- Authored 300+ page LaTeX manual and delivered critical training sessions instrumental to successful project closure.

Achievements

Honorable Mention, IEC 2025: RenderResume 📄 [Product](#) 📄 [Demo](#) 🏆 [Certificate](#) *Jun 2025 - Oct 2025*

- Developed an AI resume editor featuring guided STAR refactoring using Next.js, LangChain, LangSmith and Supabase.
- Selected as one of 14 finalists from 200+ competing teams nationally and awarded Honorable Mention (Top 7).

2nd Place, TSMC IT CareerHack 2024: deVopSCoDe 📄 [GitHub](#) 🏆 [Certificate](#) *Feb 2025*

- Shipped a full-stack AI DevOps solution using Vertex AI, FastAPI, LangChain and LangGraph on GCP within 2 days.

Projects

One-Click Outfit: AI Fashion Platform 📄 [Demo](#) 📄 [Slides](#) *Jan 2024 – Jan 2025*

- Developed and launched an AI-powered outfit recommendation platform with Next.js, TypeScript, and Supabase, featuring image-based searching and styling suggestions.
- Built a recommendation pipeline using OpenAI vision models + pgvector semantic retrieval (Supabase RPC), with structured output validation/retry logic, improving reliability.

Customized IT Solution for ShiJiou Cafe 📄 [Slides](#) *Mar 2023 – May 2023*

- Interviewed, proposed and shipped an IT solution for a local coffee shop based in Banqiao, addressing long wait times through automated customer flow management.
- Built LINE chatbot queue system, and real-time dashboard using React.js, Express.js, Firebase, and LINE Messaging API to streamline ordering, waiting, and table management operations.

Skills

Languages: C/C++, Python, JS/TS, HTML5, CSS3, SQL, LaTeX / Chinese (Native), English (Fluent, TOEIC 950)

Fullstack: React, Next, Vue, Tailwind / Express, Flask, FastAPI / PostgreSQL, Supabase, MongoDB, Firebase

DS/ML/LLM: Numpy, Pandas / XGBoost, Pytorch (CNN, RNN, Seq2Seq, Transformers) / LangChain, LangSmith

DevOps: Playwright, Jest / Docker, Docker Compose / Azure DevOps, GitHub Actions / Cloudflare, Vercel, Railway, GCP

AI Tools: Cursor (1.6B+ tokens used in 2025 📄) & Claude Code