Kuan-Cheng (James) Ku

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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 Data Structures, Algorithms, Database, Web Programming, Deep Learning, Information Retrieval & Text Mining, Cloud Native Application, Systems Analysis & Design, Management of Hi-tech Company
- Teaching assistant for 1000+ students across 7 courses, including Web Programming (EE), Web APP Development (IM), Machine Learning, Data Structures, Systems Analysis & Design, Calculus, and Marketing Management (EMI course).
- Research Assistant @ Prof. Hsin-Min Lu's BAEIR Lab, focusing on LLMs applications in job-resume matching.
- Research Assistant @ NTU Hospital Peritoneal Dialysis Smart Healthcare Project.

Experience

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

- 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.

Contract Developer, National Chung Hsing University *NCHU Buddy Program* — *Apr 2025 – Sep 2025*

- Architected and developed a full-stack student management dashboard using Next.js, Supabase, and Google Cloud API.
- Built task management, dynamic forms, real-time analytics, notifications, and Google Drive integration with RBAC.
- Shipped production platform serving 300+ MAU, completed client acceptance, and successfully concluded project handoff.

Achievements

Taiwan Digital Innovation Awards 2025: Honorable Mention 🔗 RenderResume ▶ Demo — *Jun 2025 - Oct 2025*

- Built RenderResume, a resume platform featuring AI analysis and chat agent with in-context editing capabilities.
- Gained 300+ users & 3,000+ uses during Beta, validating product-market fit as strategic entry into job matching market.
- Selected as Top 7 finalist from 200+ teams nationally.

TSMC IT CareerHack 2024: 2nd Place ⓞ GitHub 🏆 Certificate — *Feb 2025*

- Developed an AI maintenance toolkit with web and VSCode interfaces using Vertex AI, FastAPI and LangChain
- Rapidly prototyped and deployed the full-stack solution with GitHub integration on GCE and GKE within 2 days.

Projects

One-Click Outfit ⓞ GitHub ▶ Demo 📄 Report 📖 Poster 📊 Slides — *Jan 2024 – Jan 2025*

- Led team of 4 to build AI fashion recommendation platform using Next.js and Flask for personalized styling.
- Improved performance 2.4x by migrating to PostgreSQL with vector indexing and Docker deployment on VPS.

SARS: Social Advertising Recommendation System 📄 Report 📊 Slides — *Nov 2023 – Jan 2024*

- Developed ad engine integrating BERT-based comment scoring and Dijkstra-based user subgraph modeling.
- Optimized retrieval parameters using Gurobi solver and systematic backtesting.

Customized IT Solution for ShiJiou Cafe 📄 Report 📊 Slides — *Mar 2023 – May 2023*

- Developed automated customer flow system for local coffee shop, addressing wait times and queue inefficiencies.
- Built online menu, LINE chatbot queueing, and unified backend using React, Express, Firebase & LINE Messaging API.

StreamBench Agent: Continuous Improvement of LLM ▶ Presentation 📄 Report — *Oct 2024 – Dec 2024*

- Built StreamBench-inspired pipeline for medical diagnosis LLM, improving accuracy from 50.17% to 73.64%.
- Engineered prompting techniques, including clinical roleplay, structured reasoning (CoT) and negative example learning.

Volunteering and Leadership

Lecturer, Taipei Municipal Datong High School *Information Research Club* — *Sep 2022 – Jan 2026*
Lecturer, Taipei Municipal Zhongshan Girls High School *Information Research Club* — *Feb 2024 – Jan 2026*

Lecturer, NTU CSIE Sprout Program ▶ Example Lecture ⊞ Example Slides *Dec 2021 – Jun 2024*
- Designed and delivered C++ programming courses to foster pre-univ students' interest in computer science, build foundations for APCS preparation, and guide career exploration in CS fields.

Head of IT, NTU Information Management Student Association *Jun 2022 – Jan 2024*
- Led development of a faculty interview platform to support students' bachelor project advisor selection.
- Co-administered Linux workstation systems and Google Workspace for the department.

Co-founder, NTUIM Competitive Programming Team ⊙ Instagram *Jan 2022 – Jun 2023*
- Co-founded the team, recruited 2 lecturers and 36 members, and raised NT$100K worth of rental space sponsorship.
- Co-developed materials and delivered sessions on data structures and algorithms for competitive programming.
- Regularly organized in-person, team-based ICPC-format contests on Codeforces for hands-on practice.

Chief Organizer, 2023 NTUIM Programming Contest: PDAO ⊙ Facebook ▤ Article *Dec 2022 – May 2023*
- Led organization of a nation-wide ICPC-format programming competition with cash flow exceeding NT$100K.
- Innovatively opened and coordinated synchronization of two off- and one on-compus venues to provide better experience.
- Successfully recruited 81 teams comprising 226 participants, including 10+ professional competitive programming teams.
- Achieved a post-competition satisfaction rating of 4.21/5, demonstrating strong participant engagement.

Deputy Organizer, 2024 NTUIM Camp ⊙ Instagram ▶ Youtube 🕮 Brochure *Jun 2023 – Jan 2024*
- Revived a 5-day camp from 4-year pandemic suspension by recruiting 60+ staff with cash flow exceeding NT$800K.
- Oversaw marketing and design, a cross-functional department of 10, comprising art, publicity and photography teams.
- Led merchandise development, multi-channel event promotion, brand establishment, and comprehensive documentation, gaining 1K+ followers and 500K+ impressions on social media within 6 months, contributing to 200+ registrations.

Dev Lead & Event Planner, NTU Art Festival 2024 *Riddle City Team* 🔗 Legacy *Jan 2024 – Jun 2024*
- Led dev team of 3 to build treasure hunt game integrating web and physical campus riddles using Next.js and Supabase.
- Bridged planning, design, and dev teams to launch game engaging 200+ users with 600+ gameplay hours.

Member, NTU Photography Club *Exhibitions Department* 🔗 Online Exhibition *Jul 2023 – Dec 2023*
- Organized promotion booth and biannual exhibitions providing members with platforms to showcase their works.
- Developed an online exhibition website using React.js and Firebase to expand exhibition reach and accessibility.

Skills and Languages

Languages: Python, C/C++, HTML5, CSS3, JavaScript, TypeScript, SQL	**Chinese:** Native
Frameworks: Express, React, Next, Tailwind, LangChain, Flask, FastAPI, Pytorch	**English:** Fluent
Database: PostgreSQL, Supabase, Cloudflare D1 & R2, MongoDB, Firebase	TOEIC 950
Tools: Git, Docker, GCP, Vercel, Cloudflare, Azure DevOps, Playwright	