Hsin-Ling (Justin) Hsu

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Education

National Chengchi University　　Sept. 2024 – Present

Bachelor's in Management Information Systems　　*Taipei, Taiwan*
- NCCUPass, Head of AI

National Chengchi University　　Sept. 2023 – Aug. 2024

Bachelor's in Mathematical Sciences (Transferred to MIS)　　*Taipei, Taiwan*
- Google GDG NCCU, Lecturer and Core Member

Experience

AI Intern　　Sept. 2024 – Present

GoFreight　　*Taipei, Taiwan*
- Focused on computer vision (CV) recognition for logistics documents (e.g., Master Bill of Lading, Invoice), enhancing the accuracy and efficiency of automated document processing.
- Developed AI-powered dynamic web parsing solutions to mitigate crawler disruptions caused by web changes, significantly reducing maintenance costs.
- Technologies utilized: Python, LangFuse, AWS S3 & Textract.

Research Assistant　　May 2024 – Present

Institute of Information Science, Academia Sinica　　*Taipei, Taiwan*
- Advisor: Prof. Ti-Rong Wu, Reinforcement Learning and Games Lab.
- Participated in a research project on General computer game solving based on Proof Cost Network (PCN).
- Responsible for designing and developing both frontend and backend components of computer games using WGo.js, C/C++, Python.
- Designed a high-performance database for managing large-scale game records and AI-analyzed board states, optimizing system architecture to ensure stability, scalability, and efficient data access, supporting a high-performance gaming environment.

Part-time Engineer　　Jul. 2023 – Sept. 2024

ChainSea Information Group　　*Taipei, Taiwan*
- Core R&D Engineer for open-source LLM and Whisper projects at ChainSea, specializing in real-time transcription, inference acceleration, dataset generation and augmentation (e.g., Taipower project under Selected Projects), and model training.
- Designed, developed, and optimized RAG architectures to improve knowledge base retrieval accuracy.
- Conducted research and development in cutting-edge AI technologies, including the design and implementation of LLM Agent architectures for marketing workflows and a generic framework for topic management.
- Technologies utilized: Python, SentenceTransformer, TensorFlow, PyTorch.

Research & Projects

Exploration of Optimal Weight Configuration Between Keyword and Vector Search in RAG　　2024 – Present

Advisor: Prof. Jengnan Tzeng
- Continue advancing the research with the advisor, with plans to write this research into a paper and submit it to a journal.

NCCUPass APP　　2024 – Present

NCCUPass, Head of AI
- Led the AI team in the R&D of the campus AI assistant AllPass. As of September 2024, over 2,000 students at National Chengchi University have registered and used the platform, and the project has received multiple accolades in startup competitions.

High-Accuracy RAG Retriever Template　　2024

AI CUP 2024 E.SUN Artificial Intelligence Open Challenge
- Won the 'Top Accuracy Nationwide Award' in the AI CUP 2024 E.SUN Artificial Intelligence Open Challenge, ranking in the top 8% nationwide for overall accuracy.

Taiwan Power Intelligent Robot Optimization Project　　2023

ChainSea Information Group
- Participated in and completed the optimization of training data for Taiwan Power's official website intelligent AI customer service system "Dianbao" during my tenure at ChainSea.

Awards

2nd Place in AI Cross-Domain Innovation Competition　　2024

Project Lead: AI & Backend Development. News Article | Certificate

Top 20 in HOTAI MaaS Hackathon　　2024 – Present

Led system architecture design, full-stack development, UI/UX development　　*(Semi-final ongoing)*

Top 30 in LINE FRESH Campus Competition　　2024 – Present

Led system architecture and backend development　　*(Semi-final ongoing)*