

Ray Zhang

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EDUCATION

- **National Sun Yat-sen University (NSYSU)** Kaohsiung, Taiwan
Master of Information Management(MIS), AI Laboratory Sep 2023 - July 2025
Courses: Generative AI, Data analysis and visualization
- **National Changhua University of Education (NCUE)** Changhua, Taiwan
Bachelor of Information Management(MIS) Sep 2019 - June 2023
Courses: DS and Algorithm, MIS, Programming, Database, Operating System, Networking, Digital Content

EXPERIENCE

- **Winbond - Leveraging AI to Improve Operational Efficiency** Taichung
Software engineer intern July 2024 - August 2024
 - **ELK stack:** Integrated the error-reporting platform API from the Intelligent Manufacturing Center and ingested the data into Elasticsearch. Created Index Patterns in Kibana to visualize and validate key fields. Regularly queried specific fields using Elasticsearch DSL for data cleaning, performed data chunking, and stored the processed output in a vector database to support downstream analysis and modeling tasks.
 - **AI Chatbot:** Received and processed raw data, performing Base64 decoding on images. Developed a multimodal AI chatbot on the error-reporting platform that automatically updates on a scheduled basis, built using the LangChain framework.

Contribution: Reduce manual costs and waiting time to enhance work efficiency.
- **Final, Participation in AI Application Paper Competition** Taipei
Presenter
 - **RAG framework:** Developed an optimized RAG-based framework that outperformed traditional RAG in a domain-specific setting.
 - **Biomedical domain:** Designed a biomedical-specific RAG framework using fully on-premise models.
 - **Knowledge Graph Mixed Vector Space:** Developed a hybrid ranking method that combines structured and unstructured data using knowledge graph and vector similarity.

PROJECTS

- **RAG chatbot:**
 - **LangChain:** Using Langchain framework to build a RAG pipeline, split documents, and create a permanent Chroma database
 - **Streamlit:** Developed a chatbot on Streamlit platform that allows users to import external files. The robot will refer to the received external information to generate answers
- **Senior Project- LOSTLANE- LUXEM'S CRISIS:** (3D third-person adventure game)
 - **3D Modeling:** Created 3D models of both large-scale and small-scale objects using Autodesk Maya, and designed game-ready characters using Character Creator.
 - **Programming:** Imported 3D models into Unity and implemented character control logic and object interaction using C#. Developed AI enemy behaviors including object and player detection, movement patterns, and area-based navigation constraints.

SKILLS

- **Programming:** Java, C++, C#, Python, SQL
- **Tools:** Git, Langchain, Azure OpenAI service, MySQL, ELK
- **Interest:** Generative AI, Blockchain, Cryptocurrency
- **TOEIC score(Reading & Listening):** 865