

Keran Wang

+ (1) 818-869-8688 | + (86) 15201525223 | muke00915@gamil.com

EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Mathematics and Computer Sciences (Exchange) | **GPA: 4.0/4.0**

Champaign, IL

Jan. 2024 - May 2024

University of Hong Kong

Bachelor of Science in Mathematics and Computer Sciences | **GPA: 3.71/4.3**

Hong Kong, China

Sep. 2021 - Present

- Dean's Honors List

2022 - 2023

- Young Scientist Scheme

2021 - Present

RESEARCH EXPERIENCES

Chatbot for Mental Health Support

University of Illinois Urbana-Champaign

Research Assistant under Dr. Koustuv Saha

May 2024 – Present

- Developing a conversational chatbot for supporting mental health of caregivers of Alzheimer's Disease and Related Dementias (AD/ADRD) patients.
- Engineering natural language processing (NLP) pipelines for chatbot interactions, including tokenization, encoding, and sentiment analysis.
- Fine-tuning pre-trained language models on domain-specific datasets.
- Conducting user studies to gather feedback from caregivers, addressing their concerns and preferences regarding chatbot usage.

Computer Vision in Medical

University of Hong Kong

Research Assistant under Prof. Kenneth Wong

May 2023 – Jan. 2024

- Developed machine learning models for analyzing echocardiography videos, focused on prediction of ejection fraction.
- Pioneered the use of machine learning models for predicting left atrial volume.
- Achieved breakthroughs in accuracy, boosting model performance by 17.4% with an R-square around 0.8.
- Addressed the model's initial bias by augmenting the dataset through both manually collected rare data cases and training the model for labeling video data.

PROJECTS

Website Development for Math Course

May 2024 – Present

University of Hong Kong

- Utilized foundational HTML elements, including DOCTYPE declaration, metadata, and links, to define and format web content.
- Employed GitBook styles and plugins, and customized CSS styles to enhance the visual presentation, functionality, and consistency of the site.
- Integrated JavaScript, using the jQuery library, to handle dynamic elements and interactive events.
- Implemented meta tags for SEO and page metadata management.

Cloud-Based Restaurant Recommendation System

Jan. 2024-May 2024

University of Illinois at Urbana-Champaign

- Developed a scalable restaurant recommendation **web application** on **Google Cloud Platform (GCP)**
- Using **HTML** for frontend, with **Flask** for backend services and **MySQL** for data management.

Big Two Card Game Development

Sept. 2022-Dec 2022

University of Hong Kong

- Developed a **Java**-based Big Two card game featuring **GUI**, event-handling for user actions.
- Implemented **multi-threading** and **networking**, enabling real-time data processing and server communication.
- Engineered a **client-server** architecture to facilitate network play for four players.

TEACHING & WORKING EXPERIENCES

Undergraduate Teaching Assistant

COMP1117-Computer Programming

University of Hong Kong

Fall 2023

Undergraduate Teaching Assistant

MATH Summer School (MARTHA)

University of Hong Kong

Summer 2023

Student Ambassador of University of Hong Kong

Fall 2023 - Present

SKILLS

Programming Languages:

Python, C++, C, Java, JavaScript, TypeScript, HTML, MATLAB, R

Frameworks and Tools:

TensorFlow, PyTorch, Express, Git, GDB, LaTeX, MySQL, MongoDB, Docker, GCP, Geogebra

English: IELTS: 7.0

Chinese: Native Speaker