

# Xijing Wang

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## EDUCATION

### Carnegie Mellon University *School of Computer Science*

Master of Science: Automated Science

Reward & Honor: Dean's Scholarship

Pittsburg, PA

Aug 2025 - Spring 2027

### Santa Clara University *College of Arts and Sciences*

Bachelor of Science: Major in **Computer Science**, Minor in **Economics**

Reward & Honor: REAL Program Scholar - Summer Research Internship

Santa Clara, CA

Sep 2021 - Spring 2025

## Language / Skills

**Languages:** Python, C++, Swift, JavaScript, Java, C++, Go, Scala, HTML/CSS

**Mobile Development:** SwiftUI, UIKit, React Native, Redux, Core Data, Vision Framework, Faiss, NLP, CV

**AI / Machine Learning:** TensorFlow, Pytorch, CoreML, Keras, OpenCV, NumPy, Pandas

**Backend / Full-Stack:** FastAPI, Node.js, Gin (Go), Firebase, SQLite, MySQL, PostgreSQL, SQLAlchemy

**Architecture & Concepts:** MVVM, RESTful APIs, Data Privacy, CI/CD, Data Structures, HPC, Test Automation

## Experience

### Machine Learning Engineer Intern | *Shell, Linux, Deep Learning, Data Analysis*

Santa Clara, CA

Real Program Summer Funding Opportunity in LCCN lab at SCU

June 2024 - Sep 2024

- Developed and adjusted **Convolutional Neural Network (CNN) models** for testing neuroscience theories, including **Dataset Preprocessing** and **Parameter Tuning**.
- Preprocessed fMRI and anatomical data from online datasets and transferred to **WAVE HPC platform** using **Shell Scripting**.
- Analyzed research results, constructing **Correlation Matrices** using **Pearson Correlation**, and authored manuscripts detailing research findings and methodologies.

## Project

### Medical Literature Analyzer | *Python, openai, ai\_agent, RAG, transformer*

<https://github.com/Clinical-Copilot>

- Built an AI-powered literature analysis system using a **RAG pipeline** with PubMed and MedRxiv. Implemented **embedding-based semantic search** to extract clinical variables and outcomes, and applied **query optimization** with reranking to improve retrieval accuracy while reducing LLM token usage.

### Food Recognition iOS App | *Swift, SwiftUI, Tensorflow, CoreML, Python*

<https://github.com/xthomaswang/FoodRecogProj>

- Built a **SwiftUI** iOS app using **MVVM** architecture, integrating a **TensorFlow**-trained **CoreML** model for food classification with **85%** accuracy across **100+ categories**. Optimized inference speed by **4x** and reduced memory usage by **40%** through model tuning and image augmentation on **50K+ samples**.

### MasumiRanker: AI Agent Platform (Hackathon) | *Python, FastAPI, SQLite, Transformers, Faiss, React.js*

[https://github.com/xthomaswang/Masumi\\_Hackathon\\_Whym\\_MasumiRanker](https://github.com/xthomaswang/Masumi_Hackathon_Whym_MasumiRanker)

- Developed an **AI agent discovery platform** with **natural language semantic search** using **Sentence Transformers** and **Faiss** for **efficient similarity matching**. The **FastAPI** and **SQLAlchemy** backend managed agent cataloging, user ratings with automated aggregation, recommendation logging, and review data integrity via SHA-256 hashing.

### EmojiAndEmotion | *React Native, SQLite*

<https://github.com/xthomaswang/EmojiAndEmotion>

- Architected a stable full-stack iOS app using **React Native**, **Redux**, and **SQLite**, optimizing data queries by **75%** (**200ms to 50ms**). Integrated **Apple HealthKit** to analyze real-time **HRV** metrics with **98%** accuracy, and deployed automated tests covering **90%** of the codebase to accelerate bug detection by **60%**.

### Social Networking Website | *Go, Javascript, HTML/CSS*

[https://github.com/xthomaswang/blog\\_web](https://github.com/xthomaswang/blog_web)

- Developed a robust **full-stack** web server using the **Gin framework**, integrating a **RESTful API**, a **JSON-based database** for efficient data management, and a **scalable commenting system** for interactive user engagement.