ZILIN LIU

quitebig1@gmail.com | (959) 205-6628 | https://kiminus.github.io/Kiminus/ | https://www.linkedin.com/in/zilin-l-17b71022b/ | San Diego, CA, US

SKILLS

- **Proficient:** Java, C#
- **Familiar:** Python, Web Development (JavaScript), MySQL, C++
- **Platforms/Tools:** Spring (Spring Boot), React.js, Unity Engine; AWS, MySQL, and relevant tools (Git, Postman, Docker); Microsoft office tools (Excel, Word, PowerPoint)
- **Abilities**: Strong teamwork abilities and adaptability in collaborative environments, Bilingual in **Mandarin** with professional communication skills.
- **Interests: Software** Development; Video Game Developer
- **Hobbies:** DND Games, Video Games (RPG or Coop), food.

EDUCATION

UC San Dieg
Bachelor of Science, Computer Engineering **09/2022– Current (06/2026)**

- 3.9/4 GPA, CS: 3.98/4
- Provost Honors in all quarters
- Caledonian honors

PROJECTS

Course Project, UC San Diego.
Full-Stack Web App + ESP32 Integration. https://tech-assignment-final-project-kiminus.onrender.com
01/2025 – 03/2025

- **Frontend:** Built a responsive UI using TypeScript/JavaScript with user authentication and real-time sensor data visualization via dynamic charts.
- **Backend:** Designed RESTful APIs using Python FastAPI to handle device data and requests. Using MySQL to store sensors and other data. Programmed ESP32 device to collect and send data to server.

Web Project, U.S. **03/2023 – 08/2023**
Video Recommendation Website, Full Stack

- **Frontend:**
  - Developed a Twitch-like video browsing and recommendation platform using **React** with **Ant Design** for UI, adhering to **REST API** principles.
  - Implemented user authentication, video search, and personalized recommendation features using **REST API** principles
  - Implemented integration testing with **Postman** and used **JavaFaker** for data mocking
  - Designed a **thin client architecture** to maximize accessibility and user satisfaction.
- **Backend:**
  - Developed backend using **Spring Boot** and **Gradle**, using **MySQL** in a **Docker** container for data storage.
  - Implemented a session-based authentication with **Spring Security** and user password encoding (bcrypt), along with caching via **Spring Data Caching** and **Caffeine**.
  - Utilized **JDBC** in Spring Boot for data communication and repository management.
  - Deployed the application on **AWS** (with App Runner)

- **Tools/Platforms:** Java, JavaScript/React, Spring Boot, MySQL/AWS

Course Project, UC San Diego, U.S. **12/2022**
Sound Synthesizer project, https://kiminus.github.io/ECE45_Synthesizer/

- Create sound synthesizer project based on react
- Allow users to simulate waveform with envelope and filters.
- **Tools/Platforms:** React, Web development (HTML, CSS, JavaScript)

EXPERIENCE

New horizon AI, remote **09/2024-current**

Quality assurance

- create automated E2E tests using Cypress and Cucumber

Web Developer

- Designed and implemented a **streaming ETL pipeline** in Node.js to efficiently ingest, transform, and distribute real-time data streams.

Shulang Technology, aka Digital Wave, Zhejiang, China **06/2022-09/2022**

Intern Unity Developer/Tester

- Developed and implemented user-friendly UI for an oil transfer VR training project using **Unity**, enhancing usability and performance.
- Utilized **HPTK** for improved user interaction and integrated **XR Interaction Toolkit** to optimize VR experience with teleportation, reducing motion sickness and enhancing training realism.
- Leveraged Oculus XR Hand and **HurricaneVR** packages to simulate precise hand and physical interactions in a VR environment.
- Improved VR UI navigation by implementing a controller-based system, addressing user interaction challenges and significantly enhancing comfort and usability.
- Optimized rendering and performance using foveated rendering techniques.
- Collaborated with the team to write automated testing programs and prepare documentation for competitive market bidding.

Courses

Most Recent Academic history: https://tinyurl.com/3p2ds9sp

CSE 29: Systems Programming and Software Tools

- systems programming using the C programming language and software tools (e.g., gdb, valgrind, make) in the UNIX environment

CSE 30: Computer Organization and Systems Programming

- Assembly language (C, arm assembly)
- Learned and designed basic components of computer processor, Studied fundamental computer hardware

CSE 100: Advanced Data Structures

- C and C++ programming, learned and analyzed implementations of trees, graphs, and hash tables

CSE 110: Software Engineering

- Developed project management software collaboratively in a team using Agile methodologies, integrating automated testing, CI/CD pipelines, test coverage analysis, and GitHub Pages for static web deployments.

CSE 158: **AI and recommender design**

- Created and designed AI model to predict item rating and offer recommendations.

ECE 101. Linear Systems Fundamentals

- Signal and system analysis in continuous and discrete time using Fourier/Laplace series/transformation.