

Siyu Ma (Sue)

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Education

- **University of California, San Diego** **San Diego, USA**
M.S. in Computer Science 2025 (Expected)
CSE 258 Web Mining and Recommender Systems (A+), CSE 275 Deep Learning for 3D Data (A+)
- **University of Electronic Science and Technology of China** **Chengdu, China**
B.E. in Software Engineering (GPA: 3.87/4.00, Honor Graduate) 2023

Skills

- **Languages:** C/C++, Python, Golang, C#, JavaScript (JS/TypeScript), Java, HTML/CSS, CUDA, shell, SQL, Bash
- **Frameworks:** Django, Flask, React.js, Vue.js, Express, Bootstrap, jQuery, JWT, CDN, Nginx, Tensorflow, PyTorch
- **Tools:** MongoDB, Redis, MySQL, Docker, Kubernetes, Elastic Search, Unix/Linux, AWS, Azure, CI/CD, Git

Experience

- Chengdu Qianzai AI & Tech Company** **Chengdu, China**
Software Development and Algorithms Intern 02/2022 - 06/2022
Designed and developed a backend and ML part of a song generation system using lyrics input for 400,000 classroom students.
- Utilized **AWS S3 CLI** and **Python** for efficient preprocessing of a 5GB dataset, ensuring 48K to 24K audio resolution conversion while maintaining audio quality.
 - Incorporated **Redis** for advanced multi-threading, facilitating the training of our in-house developed model using only 1% of Microsoft Xiaoice's extensive data volume.
 - Crafted a backend architecture using **Node.js** and **Express.js**, ensuring quick API responses and a scalable system.
 - Conducted performance evaluations, achieving a remarkable 6x speed boost in system operations.
 - Authored user tutorial documentation in **LaTeX** and deployed the system as a web application using Docker.

Selected Projects

- MeowMate** 08/2023-present
A full-stack platform connecting cat enthusiasts for caregiving services and showcases.
- Designed 5 dynamic client-side pages using **React.JS** with integrated animations and intuitive UI.
 - Crafted a data model after in-depth entity-relation analysis, employing a **MySQL** database with 5 distinct schemas.
 - Optimized backend with **Django** using 6 **RESTful** API routes; enhanced response times with **Redis** caching.
 - Implemented advanced security with a captcha-based email verification system to mitigate Sybil attacks.
 - Successfully deployed on **AWS** using **Nginx**; post-launch, over 80% of users gave a 5-star rating.
- Phoneme-Driven Mouth & Facial Animation Web App** 01/2023-6/2023
A web app for audio-driven singing facial animation, garnering acclaim from musical professionals with a 90% precision rate.
- Developed frontend using **React** and **Redux** for state management, delivering an intuitive UI/UX. Integrated **WebSockets** for real-time feedback on mouth animation previews.
 - Built the backend using **Flask**, ensuring efficient handling of audio processing tasks. Incorporated **PostgreSQL** for storing user profiles, animation metadata, and user-generated content.
 - Implemented secure user authentication and authorization using **OAuth2.0** and **JWT**.
 - Incorporated **CDN** to optimize the delivery of animation assets, reducing load times for global users.
 - Designed a dynamic feedback system allowing users to rate and review animations, providing essential data to further refine the model's accuracy.