Roxanne Zhang

(+1) 8582678912 | ruz049@ucsd.edu | [Github](#) | [LinkedIn](#) | [Website](#)

Education

University of California, San Diego (UCSD)   2023 – 2025 (Expected)
Master of Science in Computer Science, GPA: 3.875/4.0   La Jolla, CA, USA
Shanghai Jiao Tong University (SJTU)   2019 – 2023
Bachelor of Engineering in Computer Science and Technology, IEEE Honor Class, GPA: 89.78/100   Shanghai, China
Awards: Google Women Techmakers Scholar (Top 3%), promoting equity in STEM for underrepresented groups,
Shanghai Scholarship & Shanghai Jiao Tong University Honor Thesis (**Top 1% undergraduates**)

Work Experience

PlayStation - Sony Interactive Entertainment (In progress)   2024/06 – Present
Software Engineering Intern   Aliso Viejo, CA, USA
- Will develop applications for A/B testing with **Java** and **k8s** for **cloud streaming** on a large-scale **distributed system**.

Gemsouls   2023/02 – 2023/05
Software Engineer Intern   Shanghai, China
- Developed an event management system using **Go** and **React** to handle transaction scheduling, including push notifications, promotional banner pop-ups, and more. Successfully deployed the system on an **AWS EC2** instance.
- Implemented **RESTful APIs** using **Django** for the Gemsouls iOS app backend and designed data models for **Google Firebase** access, supporting features like pop-up filtering, onboarding recommendations, and batch-adding friends.
- Optimized queries for recent user interactions by **Cache-aside** and **Write-through** policy using **Redis** caching with custom key expiration settings, reducing the average API response time by **50%**.
- Utilized **NGINX** as an HTTP load balancer to ensure app robustness during rush hours, serving over **80k+** active users.

Microsoft   2022/07 – 2022/10
Software Engineer Intern, Cloud+AI Department   Shanghai, China
- Developed an **End-to-End Testing System** to identify Azure alerting system malfunctions on its deployment **pipeline**, successfully preventing **SEV2-level** incidents, and ensuring system robustness & reliability.
- Implemented **Azure Cloud Functions** for pipeline validation with designed test cases for incident management, etc.
- Constructed **Azure automation workflows** monitoring the email service of the alerting system every 30 minutes.
- Reported email service analytics through auto-workflows, resulting in a reduction in downtime from **6 hrs** to **30 mins**.

Unity   2022/01 – 2022/06
Software Engineer Intern   Shanghai, China
- Developed a **Unity Editor Test Log Collection System** using **Flask** & **MongoDB** to store and analyze test records.
- Utilized **RabbitMQ** to implement queues between the Unity Test Framework and the designed system, ensuring test results and logs were routed to corresponding queues based on test flags, thereby maintaining data integrity.
- Implemented an error reason searching service using data indexing in **Elasticsearch** to optimize search efficiency.
- Employed **Docker Compose** to configure the environment for MongoDB, ES, and the deployment of the system.
- Designed a dashboard with **Vue** & **Grafana** to visualize over 7,000 tests and used **lazy loading** to enhance loading speed.

Projects

Fast Matrix Multiplication on CPU & CUDA (C, C++, CUDA)   2024/04 – 2024/05
- Developed optimized versions of **blocked matrix multiplication** for an ARM-based CPU and an NVIDIA T4 GPU.
- Achieved a **10x** speedup in single-core CPU performance using **packing** for improved cache use and **SIMD** vectorization.
- Implemented a **2D tiling** method with a CUTLASS-like hierarchy for GPU, achieving **80%** of the cuBLAS performance.

Disentangled Contrastive Learning for Cross-Domain Recommendation (Python, PyTorch)   2022/04 – 2023/01
- Invented DCCDR for disentangled cross-domain recommendation representation generation using **multi-space mapping** and **contrastive learning (CL)**, achieving a **12%** improvement over 8 SOTA methods (Published by DASFAA-2023).

Technical Skills

Languages: C/C++, Python, Golang, C#, JavaScript (JS/TypeScript), Java, HTML/CSS, CUDA, Rust, shell, SQL, Bash, Perl
Frameworks & Tools: Django, Gin, Flask, Spring Boot, React.js, Vue.js, PyTorch,Tensorflow, MongoDB, Redis, MySQL, Docker, Kubernetes, Elasticsearch, Unix/Linux, AWS, Azure, CI/CD, NGINX, Git, Grafana, GrowthBook, Jira