

Yuhang(Logan) Song

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EDUCATION

University of Southern California

Aug. 2021 – Dec. 2025 (Expected)

Double Major GPA: 3.92/4.0 Bachelor of Science in **Computer Science**; Bachelor of Science in **Economics/Mathematics**

- **Awards and Honors:** Academic Achievement Award, Dean's List
- **Certifications:** AWS Certified Machine Learning – Specialty, AWS Certified Cloud Practitioner, AWS Certified AI Practitioner
- **Teaching Assistant:** Discrete Methods in Computer Science, Introduction to Computer Systems, Introduction to Operating Systems

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, C++, JavaScript, TypeScript, Go, Kotlin, Dart, Lua
- **Frameworks and Libraries:** ReactJS, Spring Boot/MVC/Data/Cloud, FastAPI, Django, NumPy, pandas, Node.js, Express, Next.js
- **Databases and Data Infrastructure:** MySQL, PostgreSQL, H2, MongoDB, DynamoDB, Neo4j, Cassandra, Redis, Kafka, Hadoop
- **Platforms and Tools:** AWS, Firebase, Docker, Grafana, Android Studio, GitHub, Postman, JUnit, Jest, Mocha

WORK EXPERIENCE

Eth Tech

May 2025 – Aug. 2025

Software Development Engineer | Newark, California, United States

- Built a real-time delivery tracking platform using a microservices architecture with **Next.js**, **TypeScript**, and **AWS Lambda**.
- Ingested and decrypted GPS data from IoT devices, processed coordinates, and stored location and metadata in **DynamoDB** and **S3**; deployed a containerized data fetch service on **AWS ECS** for continuous updates.
- Created a live tracking dashboard using **ReactJS**, **Redux**, and **Tailwind CSS** with **WebSocket** integration (via **AWS API Gateway**) for driver location updates and **Google Maps API** for delivery visualization.
- Developed **RESTful APIs** with **Next.js**, containerized them using **Docker**, and deployed as serverless functions via **AWS Lambda** and **Amazon ECR** to support scalable backend operations.
- Provisioned AWS infrastructure using **Terraform**, configuring VPCs, subnets, routing tables, internet and NAT gateways, and Elastic IPs for secure and scalable network management.
- Set up **AWS Load Balancer** to distribute traffic across backend services, supporting 40K+ daily active users and 50+ QPS.
- Automated **CI/CD** workflows using **Jenkins** across multiple microservice repositories, improving deployment efficiency.

Tencent

Jun. 2024 – Aug. 2024

Software Development Engineer | Shenzhen, Guangdong, China

- Developed in-game live streaming features for *Honor of Kings* and *Yuan Meng Star* using **Go**, **Lua**, and **C++** as part of the Esports Tech team at *Timi Studio Group*.
- Built a log management module to automatically retrieve user logs based on data analyst requirements and upload them to **Tencent Cloud Object Storage**, reducing average turnaround time by ~70%.
- Built an in-game messaging interface enabling operations teams to send targeted notifications to high-tier players. Designed an asynchronous push mechanism and **MySQL**-based delivery tracking system, handling 5,000+ QPS at peak under a 12M DAU load.
- Refactored the live room connection service by implementing a graceful **TCP** restart mechanism, enabling seamless server upgrades without triggering client reconnections and cutting 5xx deployment errors from 0.5% to 0.01%.
- Created integration test suites for the refactored service using **Ginkgo** and **Gomega**; conducted memory profiling with **Drop (Go pprof-based)**, reducing memory usage by ~15% through leak detection and optimization.

Unideer Education Technology Co., Ltd.

Dec. 2023 – May 2024

Software Development Engineer | Shanghai, China

- Developed a full-stack university application platform using **Java**, **ReactJS**, and **MySQL**, supporting school search, application tracking, and school list management.
- Designed relational schemas for entities like users and universities, and built backend microservices with **Spring Boot** and **Maven**.
- Implemented **Spring Security** with **JWT** authentication to enable secure, role-based access for both guests and registered users.
- Integrated **OpenAI API** and **LangChain** to generate personalized school recommendations from user preferences, and built a chatbot to assist with university research and application planning.
- Used **RabbitMQ** to decouple services and process school recommendations asynchronously, achieving 75+ QPS at peak load.
- Built a **Redis**-based rate limiter to monitor per-user API usage, reducing third-party throttling and boosting availability to 99.9%.

PROJECTS

Meridio Math Learning Platform

Jan. 2025 – May 2025

- Developed an AI-driven educational web application with *USC Institute for Creative Technologies* to engage middle school students in math through LLM-powered conversations and interactive simulations.
- Built the frontend using **ReactJS** and **Tailwind CSS**, and implemented the backend with **Node.js** and **Express**.
- Stored user and session data in **MongoDB** and used **GraphQL** for real-time data querying.
- Designed system prompts and integrated **OpenAI GPT-4o** to generate dynamic math guidance based on user inputs.
- Created game-based simulations with **Phaser** to enhance experiential learning.