

Yuxiang (Charles) Zhu

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EDUCATION

University of California, Los Angeles (UCLA)

Expected June 2026

Bachelor of Science in Computer Science

Relevant Coursework: Programming Languages, Software Construction, Operating Systems, Algorithms and Complexity, Artificial Intelligence, Machine Learning

TECHNICAL SKILLS

Languages: Python, C++, C, JavaScript, Java, TypeScript, Gremlin

Technologies & Tools: React, React Native, Kubernetes, Spinnaker, AWS, PostgreSQL, Git, Docker

EXPERIENCE

Disney Streaming

June 2025 – September 2025

Software Engineer Intern

Santa Monica, CA

- Deployed a **Kafka**-streamed event pipeline that powers **K8s** validation and developer guidance, yielding a **53%** reduction in ImagePullBackOff and **10%** fewer affected apps.
- Engineered a real-time metrics internal dashboard in **React**, leveraging graph-based data retrieval and **RESTful** integrations to deliver advanced deployment analytics and enhance platform observability.
- Designed and implemented a parameterized **Spinnaker** pipeline template enabling automated **Kubernetes** job execution with secure **IAM** role validation.

Amazon

June 2024 – August 2024

Machine Learning Intern

Los Angeles, CA

- Developed a privacy-preserving preprocessing **LLM** that filters and masks sensitive user data before inputting it into commercial LLMs, achieving **100% precision** in data identification.
- Engineered an **NER**-powered filtering pipeline using **Hugging Face** datasets and fine-tuned models, achieving high precision in detecting and masking personal information.
- Optimized model inference on multiple **GPUs**, balancing computational efficiency with privacy protection across diverse hardware environments.

PROJECTS

Association for Computing Machinery | *Next.js, Express.js, Node.js, PostgreSQL*

September 2024 – Present

- Designed and implemented modular, reusable frontend components using **React hooks** and **TypeScript**, enabling efficient state management and rendering for **2,000+** active users.
- Developed and optimized **SQL** queries and API endpoints in **Express.js** to support advanced member search, filtering, and event navigation.
- Integrated event RSVP logic and role-based admin controls via **RESTful APIs**, ensuring secure data flow between frontend and backend services.

Bruin Dating | *Django, AWS RDS, React, Next.js, Tailwind, TypeScript*

December 2024 – Present

- Architected a full-stack matching system using **Django ORM** and **PostgreSQL**, implementing secure authentication, data encryption, and algorithmic compatibility scoring.
- Implemented a real-time **WebSocket** chat service with message persistence on **AWS RDS**, incorporating concurrency-safe operations and fault-tolerant message queues.
- Conducted usability tests and load simulations to validate system performance under peak concurrent user conditions.

AlgoAce | *Product Strategy, User Research, MongoDB, React Native, Java*

September 2024 – Present

- Developed **AlgoAce**, an **iOS** app for technical interview prep, integrating gamified challenges, AI-driven simulations, and interactive learning features.
- Built and optimized backend with **Java** and **Spring**, designing **RESTful APIs** for real-time coding challenges and AI-powered explanations.
- Designed and managed a scalable **MongoDB** database, ensuring efficient data storage and seamless app performance.