

# SHAOLONG LI

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## Education

University of California, San Diego

September 2023 – May 2025

*Master of Science in Computer Science*

GPA: 3.74

University of California, San Diego

September 2019 – March 2023

*Bachelor of Science in Cognitive Science(w/Machine Learning), Computer Science Minor* GPA: 3.86/Major 3.97/Minor 3.9

## Experience

Dassault Systèmes

May 2025 – Present

*Software Engineer - Test Automation*

*San Diego, CA*

- Configured **Geb** framework with **Spock**, **Gradle**, and **Selenium** to automate UI testing for the Biovia Machine Learning Workbench project, increasing test coverage and efficiency by 40%. Proactively maintained and updated 30+ outdated test cases to support secure and timely product delivery.
- Implemented 50+ reusable Geb pages and modules in **Groovy** to encapsulate frequently used UI components, enhancing test automation scalability and improving framework maintainability.
- Developed and maintained **CI/CD** pipelines using **Jenkins** and **GitLab** CI, enabling automated test execution on code commits and accelerating the release cycle.

METY Tech

June 2024 – September 2024

*Software Engineer*

*San Diego, CA*

- Built a referral-based discount and payout system using **Stripe** for payments and Celery Beat with **Redis** for scheduled commissions. Designed schemas to track promo code usage and implemented real-time validation and discount logic.
- Optimized **Django** back-end RESTful API services for user health plan features. Achieved up to 85% faster response times on heavy list endpoints, while improving RPS and overall system scalability.

UCSD TripleC

January 2023 – December 2023

*Software Engineer*

*San Diego, CA*

- Collaborated with the UI/UX team in **Figma** to design a student-focused ride-sharing app, developing the front-end UI library with 60+ reusable pages and components in **React**, **HTML**, and **CSS**.
- Leveraged **React Native** and **Spring Boot** to implement 20+ core features, including **JWT** based authentication with Spring Security and Auth0 SDK, improving security and enabling seamless sign-ins.

UC San Diego Jacobs School of Engineering

January 2022 – March 2023

*Instructional Assistant*

*San Diego, CA*

- Worked with other IAs to develop a framework for teaching the implementation of **advanced data structures** using **C++**. Held weekly lab hours, dedicating **25** hours per week, to help students with their programming assignments.
- Participated in lectures to support the instruction of **Unsupervised Machine Learning Algorithms**. Graded homework and conducted weekly discussion to aid students in comprehending complex concepts presented in lectures.

## Projects

**BlogApp** | *React, Node.js, Express.js, MongoDB, Redux, Redis, Docker*

- Designed and implemented a **RESTful API** service using **Node.js** and **Express.js** to handle **CRUD** operations on a **MongoDB** database.
- Developed dynamic webpages with **React**, **Tailwind CSS**, and **Flowbite**, enabling users to publish, modify, like, and comment on posts. Created a comprehensive admin dashboard for monitoring blog activity and managing posts, comments, and user accounts.
- Integrated secure authentication with **JWT** and **Google OAuth** for seamless signup and login. Utilized **Redux Toolkit** for efficient state management and **Firebase** for image hosting.
- Containerized the application using **Docker** to ensure consistent environment configurations and simplify deployment across different platforms.

**Custom Autodiff Framework** | *Python, Scikit-learn, Transformer, ML System*

- Developed a custom Automatic Differentiation framework from scratch in **Python**. Implemented core operators in a fused fashion to optimize both forward pass computations and backward pass gradient calculations.
- Leveraged the custom Automatic Differentiation library to implement and train a **Transformer** model using the MNIST dataset, achieving an **87%** test accuracy.

## Technical Skills

**Languages:** Python, Java/Groovy, C++, HTML/CSS, JavaScript, SQL, GraphQL, Haskell, Golang

**Database:** Relational(MySQL, PostgreSQL), NoSQL(MongoDB)

**Frameworks:** Django, Spring Boot, React.js, Redux, Recoil, Node.js, Express.js, Vue.js, Nest.js, Tailwind CSS, Geb/Spock