

Jonathan Zhu

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Skills

- **Languages:** Python, Java, JavaScript, HTML, CSS, SQL
- **Frameworks & Tools:** React.js, Next.js, Node.js, Express.js, Spring Boot, Flask, Material UI
- **Databases:** PostgreSQL, MySQL, MongoDB
- **Cloud & DevOps:** AWS (EC2, S3, RDS, Lambda Secrets Manager), Jenkins, CI/CD, RESTful APIs
- **Software Engineering:** Agile, Scrum, Unit Testing, TDD, Full-Stack Development
- **AI & NLP Tools:** OpenAI API, Google Gemini API, Prompt Engineering, LLM Behavior Optimization

Experience

Citywide Eye Care

Full Stack Engineer Intern

Great Neck, NY
8/2024 - 5/1/2025

- Engineered a React.js & Material-UI interface, increasing user engagement by 87% (measured via surveys).
- Developed a scalable inventory system using Python & PostgreSQL, reducing stock discrepancies by 30%.
- Optimized cloud deployment on AWS (EC2, S3, RDS), ensuring 99.9% uptime and seamless scalability.
- Implemented AWS Secrets Manager, improving data security by 25% and preventing unauthorized access.
- Automated online form processing, accelerating data handling by 35% and improving response time by 30%.

Citywide Eye Care

Software Engineer Intern

Great Neck, NY
5/2024 - 7/2024

- Migrated the clinic's website from Google Sites to React.js, enhancing patient engagement.
- Developed a responsive UI using React.js & Material-UI, optimizing accessibility on mobile & desktop.
- Integrated an automated appointment booking system, streamlining scheduling and reducing staff workload.
- Enhanced user experience & navigation, leading to a 25% increase in patient appointments.

ADP

Application Developer Intern

Roseland, NJ
6/2023 - 8/2023

- Designed and implemented an Automated Status Report, reducing decision-making time by 20%.
- Optimized CI/CD pipeline using Jenkins, reducing deployment time by 29%.
- Enhanced MySQL database performance by 6% through query optimization, using AWS Vaults.
- Extracted and integrated data from AWS (EC2, S3, RDS), Splunk, and Dynatrace into MySQL databases.
- Automated manual workflows, increasing team productivity by 71% and earning leadership recognition.

Projects

AI Health Chatbot

Intelligent Patient Support Assistant

5/2024 - 8/2024

- Designed and deployed an AI-powered chatbot utilizing Gemini API with custom system prompts, improving patient engagement and automating appointment scheduling.
- Engineered prompt structures and NLP logic to deliver accurate symptom analysis and FAQs, reducing manual workload by 50%.
- Integrated AWS Lambda functions and automated backend deployment via AWS CLI, improving scalability.
- Automated cloud deployment via AWS and CI/CD pipelines, achieving 99.9% uptime and seamless updates.

Education

Bachelor of Science in
Software Engineering

Rochester Institute of Technology

Rochester, NY
8/2021 - 5/2026