

# Louis Zeng

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## SUMMARY

Full Stack Developer with 5+ years building scalable cloud-native applications and microservices architecture using Python, React, and AWS. Expert in AI-integrated development, automated trading systems, and e-commerce automation. Proven track record of improving system performance by 40%, execution speed by 30%, and user success rates by 200% through innovative automation solutions. Experienced in CI/CD pipelines, RESTful APIs, and Agile methodologies. Seeking a dynamic environment to leverage technical expertise in AI-augmented development and scalable systems

## WORK EXPERIENCE

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### TMD Software

November 2022 – Present

*Software Engineer*

- **Architected and developed** React/Python quant trading platform enabling custom strategy creation and deployment, currently in pre-launch phase awaiting regulatory approval with comprehensive testing framework
- **Implemented real-time signal monitoring** and automated trade execution system for equities and options using WebSocket APIs and Python algorithms, improving execution speed by 30% during internal testing phases
- **Optimized data processing algorithms** by analyzing performance bottlenecks in trading environment simulation, implementing Redis caching and queue management, reducing system latency by 40% and enhancing platform responsiveness for testing scenarios
- **Collaborated cross-functionally** with product managers, designers, and compliance team using Agile/Scrum methodologies, ensuring platform meets regulatory requirements while maintaining seamless user experience design for future deployment
- **Integrated AI-powered analytics tools** including OpenAI and GenAI APIs for predictive trading insights, developing automated decision-making processes and increasing strategy accuracy by 25% in backtesting environments
- **Developed comprehensive testing suite** with unit tests, integration tests, and performance benchmarks, ensuring platform reliability and regulatory compliance readiness for production deployment

### Atmosole GmbH

October 2019 – November 2022

*Software Engineer*

- **Led development of 3 e-commerce automation SaaS products** using AWS microservices (Lambda, S3, API Gateway), supporting checkout automation and real-time product monitoring for 10,000+ concurrent users
- **Engineered scalable cloud infrastructure** on AWS using Infrastructure as Code principles, implementing CI/CD pipelines with automated testing, supporting high-volume operations with 99.8% uptime and processing 1M+ requests daily
- **Developed React dashboards** with real-time analytics and monitoring capabilities, providing status updates for automated purchasing systems and reducing manual oversight by 80%
- **Designed and implemented algorithms** for captcha solving, browser fingerprinting, and proxy management using machine learning techniques, improving user success rates by 200% and reducing system failures by 60%
- **Automated queue management** and checkout workflows using Python and RESTful APIs, increasing throughput by 150% and user profitability by \$5M+ annually across client base

- **Mentored 3 junior engineers** in best practices for cloud-native development, automated testing, and Agile methodologies, improving team code quality by 40%

## SKILLS

**Programming Languages:** Python, JavaScript/TypeScript, Java, C#, Golang, C/C++

**Frontend Technologies:** React, React Native, HTML5, CSS3, jQuery, Ajax, Expo

**Backend & APIs:** Node.js, Flask, FastAPI, RESTful APIs, Microservices Architecture

**Cloud & DevOps:** AWS (Lambda, S3, CloudWatch, API Gateway, Elastic Beanstalk), Google Cloud Platform (GCP), CI/CD Pipelines, Cloud-Native Development

**Databases:** MySQL, PostgreSQL, MongoDB, Supabase, SQL

**AI & Development Tools:** OpenAI, GenAI, Google Gemini, Cursor, Lovable, Perplexity, Vercel, Replit, Firebase

**Methodologies & Practices:** Agile/Scrum, Object-Oriented Programming, Automated Testing, UML, Problem-Solving

**Additional Technologies:** Linux, Multi-Threaded Programming, Machine Learning, Web Scraping, JSON, Bash Scripting, Figma

## ACHIEVEMENTS & PROJECTS

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- **Sports Betting Analytics Platform:** Developed machine learning algorithms for odds discrepancy detection across multiple betting platforms, enhancing decision-making accuracy by 35% and increasing profitability for 500+ users
- **E-commerce Automation Suite:** Led development of three SaaS applications processing \$20M+ in automated transactions, significantly improving user profitability through efficient checkout automation and real-time inventory monitoring
- **AI-Enhanced Chinese Astrology App:** Architected full-stack application using React Native and AI APIs, that personalized insights from ancient wisdom, made simple and actionable for modern life, with features for self-understanding, relationship compatibility, and guidance on specific questions.

## EDUCATION

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**University of New Hampshire**

Bachelor of Science in Computer Science