

Matthew Lin

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Professional Summary

Full-stack software engineer with 9+ years of experience building scalable web applications and distributed backend systems worldwide in modern frontend frameworks and backend architecture using Python, Node.js, and Java. Experienced with AI-assisted applications such as intelligent automation, recommendation systems, and chat-based interfaces. Strong in architecture, performance optimization, and mentoring junior developers.

Technical Skills

Languages: Python, Node.js (JavaScript / TypeScript), Java, SQL

Frontend: React, Next.js, Vue.js, HTML5, CSS3, Tailwind, Redux

Backend / APIs: Express, Django, Flask, FastAPI, Spring Boot

Databases: PostgreSQL, MySQL, MongoDB, Redis

AI & Automation: Integrated AI APIs (OpenAI, Hugging Face), NLP/chatbots, automated workflows

DevOps / CI/CD: Docker, Kubernetes, GitLab CI, Jenkins

Testing: Jest, Mocha, PyTest, Cypress, Selenium

Architecture: Microservices, REST / GraphQL APIs, Event-Driven Design, Caching, CQRS

Collaboration: Git, Jira, Confluence, Slack, Agile / Scrum

Professional Experience

TechWave Solutions Pte Ltd — Lead Full-Stack Engineer

May 2024 – Present | Singapore

- Architected and led development of Node.js microservices for core business domains (e.g. user management, billing, analytics).
- Developed data ingestion and transformation pipelines using Python + AWS Lambda and AWS Step Functions, enabling event-driven processing with near-real-time throughput.
- Integrated microservices and Lambda-based pipelines with message queues (e.g. Amazon SQS / SNS, or Kafka) to decouple data flows and improve resilience.
- Designed and maintained REST / GraphQL APIs for frontend modules to consume, ensuring versioning and backward compatibility.
- Built lightweight AI / ML-assisted features: e.g. recommendation engine for content/products, intelligent search and autocomplete using pre-trained models or external AI APIs.
- Implemented logging, monitoring, and observability for microservices and pipelines via centralized metrics (Prometheus, CloudWatch) and dashboards (Grafana).

- Mentored team members in writing clean, testable code; enforced best practices in unit testing (Jest / PyTest) and integration testing.
- Introduced CI/CD pipelines (GitLab CI / Jenkins) to automate build, test, and deployment across services and Lambda functions.
- Optimized performance by analyzing bottlenecks, applying caching strategies (Redis), query tuning, and lazy-data loading.
- Collaborated with product, UX, and data science teams to define ML/AI-powered features and advise on feasibility, trade-offs, and proof-of-concept development.
- Oversaw migration of monolithic modules into modular microservices and serverless pipelines, improving scalability, deployment agility, and fault isolation.

GoodSmile US — Senior Full-Stack Software Engineer

May 2022 – Apr 2024 | Remote (Singapore / U.S.)

- Collaborated with legacy PHP / MySQL systems, contributing to refactoring or interfacing modules while gradually modernizing toward microservices.
- Integrated Redis caching and Elasticsearch for high-performance search, filtering, and autocomplete features.
- Developed new backend services using Node.js microservices, exposing REST / GraphQL endpoints for frontend and mobile clients.
- Built frontend components with React / TypeScript, using modular UI design and performance optimizations (lazy loading, code splitting).
- Designed and implemented an AI-based recommendation engine, integrating with existing product catalog to deliver personalized suggestions.
- Worked with external APIs and services (logistics, order management, ERP systems) to streamline fulfillment, inventory, and customer workflows.
- Performed API profiling, instrumentation, and monitoring to identify bottlenecks; improved latency and throughput across high-traffic endpoints.
- Mentored junior engineers, participated in design reviews, and drove best practices for testability, modularity, and maintainability.
- Coordinated with U.S.-based product / design / QA teams across time zones, aligning feature roadmaps, bug triage, and release cycles.

NCS Group — Software Engineer / Full-Stack Developer

Jan 2020 – Apr 2022 | Singapore

- Developed internal and client-facing enterprise web applications using React + Node.js.
- Designed modular API services supporting authentication, access control, and data validation.
- Implemented PostgreSQL schema design and migration scripts for multiple projects.
- Refactored legacy frontend modules into React Hooks / TypeScript for better maintainability.
- Introduced unit and integration testing pipelines, improving code reliability and CI adoption.
- Collaborated with UI/UX team to implement responsive layouts and accessibility standards.
- Set up logging and monitoring tools (ELK stack) to support production troubleshooting.

- Reduced deployment errors by automating build pipelines with Docker Compose.
- Conducted technical interviews and helped onboard new engineers.

ST Engineering Digital Systems — Software Engineer

May 2018 – Dec 2019 | Singapore

- Built backend microservices and frontend UIs for smart-infrastructure and analytics products.
- Implemented REST and WebSocket APIs to synchronize live data with dashboards.
- Optimized SQL queries, reducing database query time by up to 60%.
- Deployed services in containerized environments with Docker / Kubernetes.
- Improved frontend responsiveness using asynchronous data fetching and caching.
- Partnered with data engineers to process large data streams and real-time event ingestion.
- Designed reusable modules and internal libraries to standardize code across teams.

InfiniTech Pte Ltd — Junior / Mid Software Developer

May 2016 – Apr 2018 | Singapore

- Built and maintained web applications for small and medium-size businesses.
- Contributed full-stack features (React / Node.js / MySQL) under senior supervision.
- Automated repetitive deployment steps using shell scripts and Git hooks.
- Enhanced API documentation with Postman collections and OpenAPI specs.
- Participated in daily stand-ups, sprint planning, and client feedback sessions.
- Improved system stability by adding automated tests and static code analysis tools.
- Learned software architecture and gained hands-on experience across the full stack.

Education

Bachelor of Science in Computer Science | 2012 – 2016

National University of Singapore, Singapore

Leadership & Mentoring

- Lead code reviews, pair programming, and internal workshops on design patterns.
- Introduced onboarding documentation to speed up new developer integration.
- Advocate for code quality, continuous learning, and automation best practices.

Languages

English – Fluent

Mandarin – Fluent