

PATRICK LUAN

Full Stack Developer

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Summary

Experienced Full Stack Developer with 7 years in designing, developing, and integrating AI-powered applications, cloud infrastructure, and scalable web solutions. Successfully optimized AI retrieval systems, increasing efficiency by 40% and cutting deployment cycles by 60%. Skilled in full-stack development, AI model orchestration, and cloud automation, with experience building and maintaining applications serving over 500K+ users with 99.9% uptime. Well-versed in integrating LLMs, optimizing vector search, and developing secure, high-performance backend architectures. Focused on advancing AI applications, scalable system design, and workflow automation.

Experience

Chili Piper

New York, United States

Full Stack Developer

04/2022 - 10/2024

- Designed and deployed **AI-powered search and recommendation engines using LangChain and Pinecone**, improving document retrieval accuracy by **50%** and reducing query response times by **35%**.
- Developed and maintained **full-stack applications with React.js, Node.js, and FastAPI**, serving **500K+ active users** while ensuring **99.9% uptime**.
- Automated **cloud infrastructure provisioning with Terraform and Kubernetes**, reducing cloud computing costs by **30%** and improving resource allocation.
- Built optimized **CI/CD pipelines using GitHub Actions and Jenkins**, reducing deployment failures by **50%** and decreasing release cycles from **2 weeks to 3 days**.
- Led a **team of six developers**, ensuring seamless collaboration across **AI, full-stack development, and cloud automation projects**, boosting productivity by **25%**.
- Conducted **load testing on backend services**, ensuring they could handle **1M+ API requests daily** without performance degradation.

Chili Piper

Singapore, Singapore

Junior Software Developer

06/2021 - 03/2022

- Reviewed and refactored over **10K+ lines of JavaScript, TypeScript, and Python code** monthly, improving system efficiency by **20%** and reducing redundancy.
- Implemented **automated testing with Jest and Mocha**, reducing software defects by **35%** and improving overall system stability.
- Improved **GraphQL and RESTful API response times** by **25%** by refactoring SQL queries, indexing databases, and integrating **Redis caching**.
- Enhanced **CI/CD processes using Jenkins and GitHub Actions**, cutting deployment time by **60%** and ensuring high application uptime.
- Provided mentorship and technical training for **15+ developers**, conducting weekly code reviews and improving adherence to best practices.

Experience

VINOVA

Singapore, Singapore

Back End Developer

11/2019 - 05/2021

- Built and maintained **scalable RESTful and GraphQL APIs using Node.js and Django**, handling **2M+ API requests per month** with a **99.98% uptime SLA**.
- Enhanced database performance by **40%** through **PostgreSQL query tuning, indexing, and Redis caching**, reducing API response times.
- Created secure **OAuth 2.0 and JWT-based authentication systems** for **100K+ users**, ensuring compliance with industry standards.
- Migrated monolithic applications to **microservices using Docker and Kubernetes**, reducing deployment time by **70%** and increasing scalability.
- Integrated **real-time WebSocket communication**, improving live data processing speed by **50%**.

Atta Systems

Singapore, Singapore

Front End Developer

11/2018 - 10/2019

- Designed a **React-based dashboard used by 200K+ users**, improving user engagement by **30%** and optimizing **UI/UX using Material UI and Tailwind CSS**.
- Reduced page load time from **3 seconds to 1.2 seconds** by optimizing **React state management and lazy loading components**.
- Implemented **real-time features using WebSockets**, increasing live data processing efficiency by **50%**.
- Created **reusable UI components**, reducing development time by **40%** across multiple projects.
- Conducted A/B testing, increasing conversion rates by **15%** through data-driven UX enhancements.

Education

Nanyang Technological University

Singapore, Singapore

Bachelor Degree in Computer Science

2014 - 2018

Skills

Programming: JavaScript · TypeScript · Python · C++ · C#

Frontend: HTML · CSS · React.js · Vue.js · Angular · Next.js

UI/UX Frameworks & Libraries: Tailwind CSS · Bootstrap · Material UI · Ant Design

Backend Development: Node.js · Express.js · Django · Flask · FastAPI

Databases: MongoDB · MySQL · PostgreSQL · Firebase · Redis · Azure Cosmos DB

Cloud & DevOps: AWS Lambda · Docker · Kubernetes · GitHub Actions · Jenkins · Google Cloud Platform

AI & LLMs: OpenAI API · Claude · Hugging Face · LangChain · RAG · Vector Database · AI Integration · Prompt Engineering

Testing & Automation: Jest · Mocha · Supertest