Nathan Garzya Santoso

Undergraduate Student

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📍 Surabaya, Indonesia

SUMMARY

Backend Software Engineer with 1.5 years of experience in designing, developing, and maintaining scalable and reliable server-side systems. Strong interest in Software Engineering principles, system architecture, and backend best practices.

Experienced in building and optimizing APIs, managing databases, handling system integrations, and designing clean backend architectures for web applications. Passionate about writing maintainable code, improving system performance, and ensuring reliability in production environments.

Continuously learning modern backend frameworks, system design patterns, and scalable architecture approaches to grow as a backend engineer and contribute to impactful, real-world projects.

EXPERIENCE

Software Engineer Intern   12/2025 - Present
PT HM Sampoerna Tbk. - Philip Morris International ↗

Working as part of the Backend team.

- Participated in an intensive 3-week Software Engineering Training program focused on Quality Assurance and Backend Development.
- Designed and wrote unit tests to ensure the reliability and correctness of new API endpoints.
- Contributed to the development and maintenance of AYO Ecosystem, focusing on AYO Principal, AYO Mitra, AYO Toko, and Qoncierge.

Software Engineer Intern   08/2025 - 12/2025
PT Salam Pacific Indonesia Lines ↗

Developing web-based software to streamline company processes using various tech stacks.

PROJECTS:

- Analytics Dashboard: Monitoring relocation prices across all branches owned by PT Salam Pacific Indonesia Lines. Helped reduce manual work and significantly improved operational efficiency.
- Automated Performance Review Analysis: Reducing manual workload by integrating a Large Language Model to analyze employee coaching data and generate meaningful insights. The system provided strategic HR perspectives, recommended HR-level interventions such as training, program, policies, or reinforcement, and automatically classified coaching case into 5 categories for summary reporting.
- Centralized Surveillance: Built a backend system to support an AI-based anomaly detection platform for real-time CCTV monitoring. Developed RESTful API in Golang using the Service-Repository pattern, implemented real-time streaming via RTSP, FFmpeg, and WebSocket, and integrated MinIO for video storage. Designed an Event-Driven Architecture using RabbitMQ to enable real-time communication with the AI service, and implemented automated report generation with go-cron and goroutines.

Coordinator of Information System - Full Stack Developer   10/2024 - 02/2025
Informatics Logical Programming Competition (UBAYA)

- Deployment on DigitalOcean including domain setup, SSL configuration, and server preparation.
- UI enhancements for the programming competition platform to improve user experience and accessibility.
- Compiler configuration for C++, Java, and Pascal to ensure smooth code execution during competition s.
- Auto-judge system implementation, reducing manual work and ensuring accurate and real-time judging for participants.
- Error feedback integration, allowing participants to receive meaningful error messages for better debugging during competitions.
- Docker container configuration to provide isolated environments for programming judges.

- Website maintenance, ensuring system stability and high performance throughout the event.
- Team leadership, managing responsibilities, coordinating tasks, and ensuring successful project delivery.

Assistant Lecturer
Universitas Surabaya ↗

02/2024 - 01/2025

- Delivered engaging lectures and tutorials, ensuring student understanding of core concepts.
- Provided academic support to students through one-on-one consultations and group sessions.
- Supervised student projects, ensuring quality output.

Vice Coordinator of Information System - Full Stack Developer
Multimedia and Interactive Art Competition (UBAYA)

03/2024 - 08/2024

- Develop, test, and deploy robust and scalable Web Applications using Laravel 10 as the framework.
- Maintained web applications from front to back end, ensuring high performance and responsiveness.
- Design and implement Database schemas, models, and relationships.
- Managed efficient SQL queries and data transport.
- Implement Multiple Role-based Authentication and Authorization for user access control.
- Deploy and maintain applications on Jagoan Hosting.

Vice Coordinator of Information System - Full Stack Developer
Informatics Logical Programming Competition

10/2023 - 02/2024

- Develop, test, and deploy robust and scalable web applications using Laravel 8 as the framework.
- Maintained web applications from front to back end, ensuring high performance and responsiveness.
- Managed efficient SQL queries and data transport.
- Implement Multiple Role-based Authentication and Authorization for user access control.
- Collaborated with Event Division to conceptualize a web-based game for the Semifinal of the competition.

EDUCATION

Informatics Engineering
Universitas Surabaya - Bachelor of Computing

08/2022 - Present

- GPA 3.97 / 4.0
- 1'st Place Database Student Challenge 2023/2024.
- 3'rd Place Object Oriented Programming Student Challenge 2022/2023.
- 1'st Place Algorithm and Programming Student Challenge 2022/2023.
- Actively involved in the Informatics Student Study Group Organization (2023 - 2024) as a member of Public Relation Department.
- Participated in various UBAYA committees such as Maniac, MOB Universitas, ILPC, MOBFT, Industrial Games, and has been a member/coordinator of IT Division.

SKILLS

PHP	Advanced	PostgreSQL	Intermediate
Golang	Intermediate	Laravel	Advanced
Python	Intermediate	Flutter	Basic
TypeScript	Intermediate	Docker	Intermediate
C#	Intermediate	Git	Intermediate
Kotlin	Basic	AWS	Basic
MySQL	Intermediate	Redis	Basic

LANGUAGES

Indonesia	Native	English	Intermediate