

Naufal Hakim

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EXECUTIVE SUMMARY

Software Engineer with 3+ years of experience in architecting scalable backend systems for edtech, e-commerce, and AI-powered enterprise applications. Proven leadership in guiding development teams, mentoring junior engineers, and aligning technical execution with business goals. Expert in designing high-performance systems using Golang, Laravel, and microservices, with a strong track record of building Agentic AI systems using OpenClaw for automated data intelligence and advanced Robotic Process Automation (RPA). Skilled in optimizing database performance (60%), refactoring legacy systems (80%), and engineering dynamic BI pipelines that deliver tailored, automated insights to Board of Directors (BOD) and operational stakeholders.

EDUCATION

Binus University

Feb 2024 – May 2026

Computer Science, Bachelor Degree

Cumulative GPA: 3.88/4.0;

Relevant Coursework: Algorithm Design and Analysis; Program Design Methods; Data Structures; Big Data Technologies; Machine Learning

IPB University

Aug 2019 – Jul 2022

Computer Engineering, Vocational School

Cumulative GPA: 3.51/4.0;

Relevant Coursework: Algorithms; Data Structures; Clean Code and Design Pattern; Object-Oriented Programming; Database;

WORK EXPERIENCES

HW GROUP – Jakarta, Indonesia

Apr 2025 – Present

AI & Automation Engineer

- Architected a Data Intelligence Agent using OpenClaw, replacing legacy RPA systems to fully automate complex reporting workflows and enterprise data pipelines.
- Cost Optimization: Slashed operational automation costs by ~97%, reducing legacy RPA expenses from \$1,100/month to approximately \$30/month through the deployment of efficient OpenClaw AI agents.
- Integrated MySQL and BigQuery with AI agents to process raw data and automatically deliver actionable insights via Telegram, significantly reducing manual reporting overhead.
- Engineered dynamic AI personas to serve cross-functional stakeholders: generating high-level strategic summaries and visual charts for the Board of Directors (BOD), precise financial breakdowns (CSV/XLSX) for Finance, and flexible drill-down datasets for BI Analysts.
- Streamlined operational decision-making by deploying near real-time AI tracking for day-to-day outlet performance, sales trends, and customer behavior.
- Customer Service AI: Developed and deployed a dedicated Customer Service (CS) Agent to autonomously assist users with inquiries, improving response times and user satisfaction.
- Engineering Automation: Built a 'Senior Developer Agent' designed to perform automated code reviews, enforce best practices, and seamlessly integrate with ClickUp to streamline project and task management.
- AI-Driven Development: Habitually leverage AI-agentic development tools in daily workflows to significantly accelerate the writing, refactoring, and reviewing of code, particularly when architecting backend systems in Go, Python, and Laravel.

Backend Developer

- Developed and maintained backend codes and features, and resolved bugs for **Holywings Apps and Web** backend services.
- Implemented **localization** support to enable international outlets to process **transactions** based on their respective country's configuration, such as currency, tax rules, and payment methods.
- Integrated the system with **Garuda Miles API** to allow users to seamlessly redeem their **Holywings points** for Garuda Miles rewards.
- Developed and maintained an internal sales management system for investors using **Laravel Livewire**, **MySQL**, and **OAuth** for secure authentication.
- Applied **Clean Architecture principles** to ensure scalability, maintainability, and separation of concerns.

- Covered core business logic with comprehensive unit testing (**90%+ coverage**) to ensure system reliability and catch regressions early.
- Designed and developed a **Golang-based** background worker to handle face verification for **HolyMoment** and **HolyFriends** user onboarding.
- Utilized **CompreFace** (open-source face recognition) to compare and validate user photos with high accuracy.
- Integrated with **RabbitMQ** to trigger verification jobs asynchronously and manage queue-based processing.
- Implemented concurrent processing using **goroutines**, successfully handling **60,000+ active user** uploads simultaneously.
- Focused on system resilience and throughput, ensuring minimal delay in face-matching results and preventing system overload during peak usage.

ARKADEMI – Jakarta, Indonesia

Sep 2022 – Feb 2025

Backend Engineer

- Developed and maintained codes/features, and resolved bugs in the backend services of a Learning Management System using **Lumen/Laravel** and **MySQL**. Have worked on **AWS** related services such as S3 for photo, file, and video storage. Implemented **RabbitMQ** for order processing, integration with third-party payment gateways. And using **Docker** as containerization.
- Migrated about new services using **Go (Programming Language)** by implementing **Clean Architecture Principles**.
- Took the initiative to create comprehensive API documentation and establish standardization practices using **OpenAPI**, ensuring consistency, clarity, and ease of use across all service endpoints.
- Create automated features and tasks using Laravel's Cron Job, automating repetitive tasks and increasing work efficiency from manual.
- Identified and resolved bugs in the application Arkademi and Prakerja Arkademi.
- Enhanced service performance by optimizing queries and refactoring algorithms from legacy.
- Enhanced service performance by refactoring **WordPress** functions into a **Lumen (Laravel)**.
- Improve service performance by refactoring **WordPress** table base to **relational tables (MySQL)**.
- Utilized several third-party services for enhanced functionality and performance.
- Collaborated with cross-functional teams (**Frontend, Mobile, Data, System Admin, DevOps**) to deliver high-quality applications within project timelines.
- Collaborated with the **Product Team** to understand business requirements.
- Helped the team doing local postman Regular API documentation and Prakerja API.
- Moved millions of data from the WordPress model table to a new table (relational table) so that the query runs quickly using **concurrency** techniques in **Golang (goroutine)**.
- Provided an example of using **Redis** to solve slow functions in the API.
- Implement unit test in **Golang**.
- Implemented centralized **logging and monitoring** for production environments using **Logrus** and **AWS CloudWatch**, ensuring fast issue resolution.
- Implement **Firebase** across multiple APIs.
- Create a certificate generator to run in the background using **TypeScript** and **RabbitMQ** deploy it on **Google Cloud Platform (GCP)** implement **CI/CD**.

PROACTIVE EDUCATION – Yogyakarta, Indonesia

Jan 2022 – Mar 2022

Internship

- Helped company build Robot and **Internet of Things**.
- Helped company **teaching** high school students who are interns
- Developed Web Application for employee attendance and door opening automatic using **PHP Framework (Laravel), Rest API, and MySQL** for database.
- Designed and assembled an **Internet of Things** device (ESP8266 Module) as a client for the Web Application and Programmed using **C++ / Arduino** language.

PROJECT EXPERIENCES

Live Shopping Assistant with YOLO + CLIP + FAISS (Undergraduate Thesis Project)

Sep 2025 – Jan 2026

- Designed and implemented a real-time live shopping assistant system that automatically detects and highlights products shown during live streams.
- Built using Golang (WebSocket + WebRTC SFU) for real-time streaming and bidirectional communication between sellers and viewers.
- Integrated YOLO for object detection, CLIP for semantic feature extraction, and FAISS for similarity-based product retrieval from the product catalog.
- Enabled sellers to automatically “pin” products being demonstrated during live sessions, reducing manual interaction and increasing sales conversion.
- Utilized: **Go, Python, React JS, PostgreSQL, YOLOv11, CLIP, FAISS, WebRTC SFU, WebSocket**

Intellitalk

May – Jun 2023

- The Intellitalk is a self-interview application using AI to help HR Interview with new candidates
- This app is used to take part in hackathons with my friends.
- Utilized: **Go, Next, MongoDB, OpenAI, Python**

Automatic Door and Presence using Fingerprint based Internet of Things

Jan – Mar 2022

- The purpose is to make it easier for employees to take attendance and open the door.
- The tool is made using a Fingerprint sensor, Keypad, LCD 16x2 and a tool connected to the website.
- This application is a final project.
- Utilized: **Laravel, Bootstrap.**

NHKasir

Dec 2021

- NH KASIR is a cashier application. The purpose is to help process transactions in a business.
- This application is a competence test computer engineering.
- Utilized: **HTML, JavaScript, CSS, Bootstrap, PHP, Laravel.**

Briket

Oct – Nov 2021

- BRIKET is a ticket booking application. The purpose is to facilitate users BRI to book tickets.
- This application is a web-based programming and software engineering course assignment.
- Tools design UI using Figma.
- Utilized: **HTML, JavaScript, CSS, Bootstrap, PHP, Laravel.**

Computer Augmented Reality

Feb – Jun 2021

- CAR is an augmented reality-based android application that aims to make it easier to learn computer components.
- This application is a multimedia computer course assignment.
- Tools design UI using **Figma**.
- Utilized: **C#, Unity, Blender.**

TECHNICAL SKILLS

Languages: HTML5, CSS, JavaScript, C++, GraphQL; Advance in PHP, Python, SQL, Golang

Frameworks: Laravel, Lumen, Gin, Express Js, Hapi, Nest Js

Databases: MySQL, PostgreSQL, MongoDB, Redis

Developer Tools: Git, AWS, Firebase, Docker, RabbitMQ, GCP, Github Actions, CI/CD, gRPC

Certifications & Training: Pemrograman Go-Lang Pemula sampai Mahir (Eko Kurniawan - Udemy), Belajar Membuat Aplikasi Back-End untuk Pemula (Dicoding Indonesia), Belajar Prinsip Pemrograman SOLID (Dicoding Indonesia)