

# Imron Athoriq Firjatulloh

Backend Engineer · APIs, Integrations & Cloud IoT

## PROFILE

Backend engineer at PT Serasi Autoraya (Astra International) building and maintaining the APIs behind IBID, a high-volume automotive auction platform. Track record of measurable improvements in authentication reliability (**-30%** login issues), API performance (**+20%**) and process automation (**-25%** manual work), plus cloud IoT experience moving vehicle telemetry through Azure IoT Hub and Service Bus. Dual background in Information Systems (GPA 3.89) and Instrumentation Engineering; comfortable from business requirements to database indexes to embedded devices. Works in Agile/Scrum teams and uses AI-assisted engineering to ship faster.

## EXPERIENCE

**Backend Developer** · PT Serasi Autoraya (Astra International Group), Jakarta Mar 2025 – Present

- Maintain and extend backend services and REST APIs for **IBID**, the company's automotive auction platform supporting large-scale daily auction operations.
- Integrated **Azure credential-based login** into the authentication flow, reducing login-related issues by **30%** and improving platform reliability.
- Refactored backend services and optimised API endpoints, improving system performance by **20%**.
- Built and optimised internal operational platforms, reducing manual processes by **25%** and improving administrative efficiency.
- Translate operational stakeholders' requirements into technical designs; deliver in Scrum with developers, QA engineers and business owners.
- Apply AI-assisted engineering (Claude-based tooling) to debugging, refactoring and feature delivery.

Laravel · PHP · REST APIs · Azure · MySQL · SQL Server

**IoT Engineer Intern** · PT Serasi Autoraya (Astra International Group), Jakarta Feb 2024 – Apr 2024

- Designed and built a **Flutter GPS tracking app** for real-time fleet monitoring and operational visibility.
- Developed **Express.js** and **MongoDB** services processing vehicle telemetry via **Azure IoT Hub** and **Azure Service Bus**.
- Improved telemetry delivery reliability and event-processing efficiency by **35%** through a scalable cloud architecture.
- Researched and prototyped connected-vehicle systems for fleet and rental operations; designed device communication workflows with the engineering team.

**Backend Developer Intern** · PT Serasi Autoraya (Astra International Group), Jakarta Jul 2023 – Dec 2023

- Developed and optimised backend features for the IBID auction platform in **Laravel (PHP)**.
- Contributed to **Sourcing Management System 2.0**, accelerating procurement workflows by **20%**.
- Reduced recurring bugs by **25%** through debugging, performance fixes and code optimisation.
- Used **Docker** and **Nginx** to standardise local development and deployment workflows.

**IT Planning & Budgeting Intern** · PT Pertamina Hulu Indonesia, Jakarta Sep 2021 – Feb 2022

- Built plan-vs-actual IT budget dashboards, improving reporting clarity and decision-making efficiency by **40%**.
- Built an electronic archive and document numbering web app in **CodeIgniter 4**, reducing manual document processing by **30%**.
- Automated data processing for IT budgeting and reporting; produced materials for company-wide internal initiatives.

## SELECTED PROJECTS

**Auction Platform API** (open source, 2026) — Node.js/Express vehicle-auction backend: JWT auth, bidding engine with optimistic locking, anti-sniping and idempotency keys, event-driven notifications with dead-lettering, GPS telemetry ingest, OpenAPI docs, Docker + Nginx, 37 automated tests, GitHub Actions CI.

**Portfolio in React Native** (2026) — Expo Router app exported as a static website with per-page metadata and a live playground for the API above.

**Human Motion Detection with ESP32-CAM & LD2410** (2024) — Embedded IoT system using 24 GHz radar presence detection and Wi-Fi photo transmission (undergraduate thesis).

**Banknote Authentication with Arduino Uno** (2023) — RGB colour-intensity measurement with LDR sensors to verify Indonesian Rupiah notes.

**Multiclass Classification with TensorFlow** (2022) — Machine learning model built during AI/data science certification.

EDUCATION

|                                                                                                                                                                               |                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bachelor of Instrumentation Engineering</b><br>Universitas Brawijaya, Malang · Sep 2020 – Jan 2025<br>GPA 3.47/4.00 · Microcontrollers, PLC, embedded systems, electronics | <b>Bachelor of Information Systems</b><br>Politeknik STMI Jakarta · Aug 2018 – Dec 2022<br>GPA 3.89/4.00 · Database design, ERP, business process analysis, UI/UX |
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PUBLICATIONS

Firjatulloh, I. A. (2024). *Sistem Deteksi Gerakan Manusia dengan Pengiriman Foto melalui WiFi Menggunakan ESP32CAM dan LD2410* [Undergraduate thesis, Universitas Brawijaya]. repository.ub.ac.id/id/eprint/235679

Firjatulloh, I. A. (2022). *Rancang Bangun Sistem Informasi Arsip Elektronik Menggunakan Framework CodeIgniter 4 pada Divisi IT di PT Pertamina Hulu Indonesia* [Undergraduate thesis, Politeknik STMI Jakarta].

TECHNICAL SKILLS

|                           |                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Backend</b>            | PHP (Laravel, CodeIgniter 4), JavaScript / Node.js (Express.js), REST API design, authentication (Azure, JWT) |
| <b>Cloud &amp; DevOps</b> | Azure IoT Hub, Azure Service Bus, Docker, Nginx, Git                                                          |
| <b>Databases</b>          | MySQL, SQL Server, Oracle Database, MongoDB                                                                   |
| <b>Mobile &amp; IoT</b>   | Flutter, ESP32 / ESP32-CAM, Arduino, embedded systems                                                         |
| <b>Other</b>              | Python, Java · Agile / Scrum · Bizagi Modeler · ADempiere ERP                                                 |

LEADERSHIP

**Programming Team Lead** · PyRoC (Physics Robotic Club), Universitas Brawijaya Feb 2023 – Dec 2023

- Led the programming division for robotics projects: task distribution, timelines and coordination with multidisciplinary members.

CERTIFICATIONS

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|---------------------------------------------------------|----------------------------------------------------------------------------|
| Elements of AI — MinnaLearn (2022)                      | Machine Learning Developer — Digital Talent Scholarship (2022)             |
| Data Visualization with Python — Cognitive Class (2022) | Database Design & Programming with SQL — Digital Talent Scholarship (2021) |