

Sultan Argya Safa Firdaus

Software Engineer

Email: sultanfirdaus324@gmail.com

Links: github.com/sultanasf | linkedin.com/in/sultanfirdaus

Summary

Fresh Applied Computer Science graduate and software engineer with backend-oriented depth and end-to-end experience across React/Next.js and Laravel interfaces, TypeScript, Go, and PHP backends, relational data, event integration, and application-aware deployment. Work spans browser state, REST, SSE, and realtime APIs, modular runtimes, Kafka and Protobuf ingestion, TCP/TLS telemetry, package delivery, containers, and Linux-hosted services. Translates requirements into application workflows, integrates components across process and persistence boundaries, and carries work from implementation through structured technical documentation, deployment, or source handover according to project scope. Experience includes independent freelance delivery, collaborative application development, internship backends, final-project integration, and protocol-focused personal work.

Experience

Freelance Prototype Developer. May 2026

Medical Event Website PoC. One-to-two-week source-code deliverable

- Independently translated user requirements into a React, TypeScript, Vite, and Tailwind CSS pitching prototype derived from and extended beyond Figma Make output.
- Modeled synchronized browser-only workflows for registration, pricing, company billing, finance review, scientific submissions, attendance, materials, and certificates.

Full-stack Developer. March – April 2026

SPECTRA 2026 Computer-Based Testing Platform. Collaborative project; event-duration deployment

- Owned Supabase integration, Server Actions, SSR/CSR rendering decisions, data-oriented state, timeout logic, and other logic-heavy functionality while teammate focused on design and layout.
- Implemented referral registration, scheduled MCQ/essay delivery, answer-key-stripped payloads after assignment validation, automated scoring, submissions, and participant/admin workflows.
- Built local answer persistence and Supabase Realtime participant-ban handling, then managed Vercel deployment, GitHub integration, and domain configuration.

Freelance Full-stack Developer. September – December 2025

Puri Cendekia School Website. cPanel deployment

- Independently developed a Laravel 12, Blade, Tailwind CSS, and Eloquent school information website with role-gated content administration.
- Implemented admin workflows for programs, activities, registration information, committee content, visitor input, academic calendars, and media metadata.
- Deployed through a conventional cPanel workflow; public website: puricendekiaies.com.

Backend Developer Intern. August – December 2025

PT Piramida Teknologi Informasi. Mooda ride-hailing minimum viable product; source-code handover

- Owned implementation of the Fastify, TypeScript, PostgreSQL, and Prisma ride-hailing MVP backend for customer, driver, and administrator roles.
- Built ride requests, Haversine-based fare estimates, nearby-driver matching, lifecycle controls, ratings, histories, driver statistics, and administrative views.
- Added Socket.IO ride/location events, Zod validation, rate limiting, Pino logging, health checks, and Swagger documentation.

Freelance Full-stack Developer. May – June 2025

Configurable Voting Application. Source-code handover; deployment outside scope

- Independently built Laravel/Blade administration for categories, candidates, participant eligibility, branding, schedules, CSV imports, and pre-registered Google OAuth access.
- Implemented category-scoped voting checks, encrypted-choice storage, event/listener tallying, and ApexCharts result views using an adapted admin template.

Backend Developer Intern. January – June 2025

PT Mitra Informatika. Proprietary communication platform; source-code handover

- Owned implementation of the internship backend scope using a modular-monolith architecture, internal framework, MySQL, REST, and WebSocket interfaces.
- Co-authored handover system design covering relational data, authentication, messaging, groups, contacts, presence, notifications, call signaling, and known runtime constraints.

Backend Developer and Product Owner Assistant. March – December 2024

ReMi - Remind Me. Sole responsibility for backend and assigned product scope

- Owned Laravel REST API backend implementation supporting separate mobile and web client applications.
- Handled product ideation, Lean Canvas, target-user definition, user-satisfaction review, and product and sprint backlog planning.

Education

Applied Bachelor of Computer Science in Informatics Engineering. July 2022 – July 2026

Politeknik Elektronika Negeri Surabaya (PENS). GPA: 3.76/4.00; S.Tr.Kom.

Projects

Backend and Platform Engineer – Final Project. July 2025 – June 2026

Modular Monolithic Backend for Fleet Management System. Thesis approved July 2026

- Designed and implemented a TypeScript/Fastify modular-monolith runtime and seven independently versioned business modules behind one REST and SSE deployment.
- Built Nusakit SDK for dynamic package loading, dependency-first ordering, typed inter-module dependency injection, and runner-managed initialization and registration phases.
- Integrated Bun with a Node.js Kafka worker over Unix domain sockets, processing Schema Registry and Protobuf payloads into PostgreSQL/PostGIS services.
- Created local-package development and private npm package assembly workflows with centralized migrations, Docker runner template, GitLab CI publication jobs, and a research LXC environment.

Go Telemetry Receiver. June 2026

Personal Project. One-week implementation; lab deployment

- Built a standard-library Go TCP/TLS receiver for FMC650-oriented AVL telemetry with Codec 8 Extended decoding, CRC validation, raw IO preservation, and record-count acknowledgements.
- Designed append-only JSONL ingress that synchronizes accepted packets before positive acknowledgement, plus fail-closed Manual CAN/OBD-II decoding and bounded normalized output.
- Deployed the service in Proxmox LXC and routed tracker TCP traffic through a lab router and Nginx stream proxy.

Leadership & Organizations

Head of Research Department. December 2024 – December 2025

Himpunan Mahasiswa Teknik Informatika PENS. Student organization

- Previously served as Staff from October 2023 through November 2024 before the department-head term.

Course Certificates

Cloud Practitioner Essentials (AWS Cloud Fundamentals course). December 2024

Dicoding Academy. Course certificate valid through December 2027

- Completed a 13-hour course covering AWS compute, networking, storage, databases, security, monitoring, pricing, migration, and Well-Architected fundamentals.

Beginner Back-End Application Development. September 2024

Dicoding Academy. Course certificate valid through September 2027

- Completed a 45-hour course covering Node.js/Hapi REST APIs, EC2 deployment over SSH, Postman testing, and a Bookshelf API submission.

JavaScript Fundamentals. September 2024

Dicoding Academy. Course certificate valid through September 2027

- Completed a 46-hour course covering JavaScript syntax, data structures, modules, object-oriented and functional programming, asynchronous processing, and code quality.

Skills

Languages: TypeScript, JavaScript, PHP, SQL, Go

Frontend: React, Next.js, Blade, Tailwind CSS, Vite, Flowbite React, Bootstrap, jQuery

Backend and APIs: Fastify, Laravel, Next.js Server Actions, Supabase, REST, Socket.IO, SSE

Data and messaging: PostgreSQL, PostGIS, MySQL, Prisma, Eloquent, Kafka, Schema Registry, Protobuf

Architecture and runtime: Modular monolith, dependency injection, Bun, Node.js, Unix domain sockets, worker processes

Delivery and infrastructure: Docker, GitLab CI package publication, private npm registry, Vercel, cPanel, Linux, Proxmox LXC, Nginx, TCP/TLS