

Mohammed Alama

Senior Backend Engineer

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SUMMARY

Senior Backend Engineer and Technical Lead with 9 years of professional experience delivering production-grade PHP and Laravel systems operating in 50+ countries.

Specializes in Domain-Driven Design (DDD), clean architecture, and modular monolith design across complex domains: Transportation, E-Commerce, Multilateral Banking, and Sports federation systems.

9 years of end-to-end ownership — from architecture and API design to infrastructure deployment and team mentorship. Deep expertise in event-driven systems, distributed data pipelines, geospatial queries, TDD, and AI-assisted development pipelines.

WORK HISTORY

Senior Software Engineer / Lead Engineer

SinaiTaxi | Cairo, Egypt | 08/2025 - Present

- Architected and shipped a production-grade transportation booking platform from scratch, serving customers across 50+ countries as sole architect and lead developer.
- Structured a Laravel 10 modular monolith with 35 independently maintainable domain modules and 900+ PHP classes following Domain-Driven Design (DDD).
- Designed a polygon-based pricing engine via GIS queries (Eloquent Spatial, MySQL), enabling 22k+ configurable geographic zones adjustable without code changes.
- Built async logging pipeline using Redis Streams to buffer 50K+ events/hr. Workers drain to PostgreSQL for reporting, isolating production MySQL from write overhead.
- Shipped a RESTful JSON API with 200+ endpoints compliant with JSON:API spec, secured with Sanctum token authentication and auto-generated OpenAPI documentation via Scramble.
- Deployed DigitalOcean infrastructure with Nginx, PHP-FPM 8.2, MySQL 8, Postgres 18.3, and Redis; achieved 99.9% uptime and maintained Docker-based local parity to eliminate environment drift.
- Integrated Stripe for payment processing, ZohoBooks for accounting reconciliation, and Mailgun for transactional email.
- Authored comprehensive arc42 architecture documentation for all 25 modules covering architecture overviews, data models, API contracts, and settlement logic.
- Established workflow using ADRs, SpecKit, and quality gates—producing documented architectural decisions across 35 modules to streamline development and align system design.

Software Engineer Specialist

Link Development | Cairo, Egypt | 08/2024 - 08/2025

- Took full ownership of development across 2 enterprise client engagements, managing delivery from requirements through production deployment.
- Conducted thorough code reviews applying SOLID principles and design patterns on large codebases — maintaining code quality standards across a 5+ developer team.
- Mentored 4 mid-level developers through structured 1:1s, code review feedback, and Clean Code workshops, accelerating their onboarding onto enterprise-grade PHP codebases.

IsDB - Islamic Development Bank

- Delivered a Corporate Procurement module from scratch for a major multilateral bank, covering 50+ tender workflow types and serving procurement operations across 57 countries.
- Integrated Amazon CloudSearch to index 10,000+ procurement documents, tenders, and supplier records — enabling full-text search across the entire procurement knowledge base.
- Automated procurement notifications via Campaign Monitor email pipelines reaching 200+ registered vendors across tender announcements, bid deadlines, and award decisions.
- Architected a configurable branched content type system supporting 6+ editorial content schemas without code deployments, within strict multilateral bank compliance requirements.

IHF - International Handball Federation

- Optimized IHF's global platform performance by replacing full-table-scan user listings with paginated, dedicated COUNT queries—ensuring responsiveness for 200+ admins during live events.
- Decomposed a 5.8k-line monolith controller into 18 single-responsibility controllers, reducing merge conflicts and speeding feature delivery for a codebase serving 209 national federations.
- Replaced full-dataset dropdowns with server-side autocomplete for player/official filtering, cutting page payload and boosting UX for admins managing 600+ players per event.
- Built a custom MySQL driver extension and QueryLogger to capture all DELETE queries, metadata, and row counts, providing tamper-evident trails with 1-month automated retention.
- Led a breaking data model migration introducing a participantMember bridge entity across 12+ controllers to fix access inconsistencies and normalize multi-federation tracking.
- Fixed a critical email bug where cron-driven BCC lists accumulated across iterations; introduced conditional audit logging to eliminate false delivery records across 32 nations.

Backend Engineer

NFQ | Cairo, Egypt | 01/2022 - 07/2024

- Led Clean Code workshop for 25+ aspiring developers through the company internship program, covering refactoring techniques, SOLID principles, and practical code smell detection.

Spryker - Composable Commerce Platform

- Applied Domain-Driven Design (DDD) principles across 900+ modules in Spryker's composable commerce platform spanning B2B, B2C, and Marketplace layers.
- Extended Spryker Core Commerce with 3 security-focused modules strengthening authentication, authorization, and payment data protection.
- Authored comprehensive test suites using Codeception and Robot Framework, achieving 100% API coverage on the Glue layer.
- Optimized Elasticsearch search queries reducing query response time; introduced Redis caching strategies improving repeat-request performance.
- Used Docker for local development and deployment, maintaining full production environment parity across the team.

Actindo - Digital Commerce OS

- Released, tested, and deployed PHP code for Actindo's digital commerce OS, contributing to 3+ integration modules.
- Refactored 2 integration modules responsible for Salesforce Cloud Commerce and Adyen payment gateway, reducing coupling and integration fragility.
- Maintained and extended Actindo's DataHub Module enabling efficient data integration, transformation, and synchronization across 10+ connected data sources.
- Constructed an Elasticsearch archiving module eliminating database bloat across 15+ high-volume entity types, enabling indefinite entity history retention at scale.
- Introduced a queueing system for Actindo API endpoints with rate limiting and 100% request traceability across 10+ outbound API integrations.

Backend Engineer

Core Experts Consulting | Cairo, Egypt | 09/2021 - 02/2022

- Collaborated with operations management to identify organizational needs and design effective technical solutions across 2 internal workflow systems.
- Built and launched an internal admin dashboard used by 3 operations teams, replacing manual reporting with real-time data views using Blade components and Metronic.
- Adopted the Pipeline Design Pattern to manage filters on index pages, cutting filter-addition effort from multi-day code changes to 30-minute configuration.
- Connected Oracle DB ensuring seamless database functionality across 2+ enterprise application layers.

Backend Engineer

Fritill | Cairo, Egypt | 03/2020 - 08/2021

- Maintained back-end PHP development ensuring website integrity, security, and 99%+ availability.
- Built a reservation system using Laravel with Test-Driven Development (TDD), achieving 90%+ test coverage from day one.
- Established real-time data synchronization between the application and ERPNext via RESTful API, keeping 100% of inventory and booking records in sync across 2 systems.

- Configured authentication using Laravel Passport and created a management dashboard with Laravel Nova, reducing admin task time by 60%.
- Added 3 payment options via CowPay: Credit Card, Fawry, and CashOut.

Backend Engineer

Mspired | Cairo, Egypt | 02/2019 - 08/2019

- Converted 8+ mockup designs into responsive web pages using HTML, JavaScript, CSS, AJAX, and JSON.
- Provided website development using WordPress themes with 5+ third-party service integrations.
- Connected Facebook ChatBot via 3 custom REST API endpoints, enabling 24/7 automated customer interaction.

TECHNICAL SKILLS

Core Practices: Clean Code, SOLID, OOP, Design Patterns, DDD, Modular Programming, Enterprise Patterns, MVC, TDD, REST API, JSON:API, OAuth, OpenAPI

Languages And Runtimes: PHP 8.x, Python, SQL, JavaScript, HTML, CSS

Php Frameworks: Laravel, Symfony, Yii, Zend

Ecommerce Platforms: Spryker

Databases: MySQL, PostgreSQL, SQLite, Redis, Elasticsearch, AWS CloudSearch

Orm: Eloquent, Doctrine, Propel

Testing: PHPUnit, Codeception, Behat, Pest, Robot Framework

Cms: Drupal, WordPress

Devops: Docker, Docker Compose, Nginx, PHP-FPM, Git, Azure CI/CD, AWS

Cloud Services: AWS, Azure DevOps, DigitalOcean

Infrastructure: Linux (LEMP Stack), Redis Streams, RabbitMQ, Queuing Systems, Laravel Horizon

Methodologies: Agile, Scrum, Architecture Decision Records (ADR), Code Review, Technical Leadership, Mentorship

EDUCATION

Bachelor of Computer Science | Modern Academy, Maadi, Cairo | 10/2014 - 08/2019

LANGUAGES

Arabic (Native) | English (Professional Working Proficiency)