



Omar Afzal

SENIOR SOFTWARE ARCHITECT / AGENTIC AI / DISTRIBUTED SYSTEMS

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Remote / Global

PROFILE

Senior Software Architect with 13+ years designing distributed systems, AI-native platforms, mobile-to-backend products, and developer tooling at scale. Currently leading engineering at ClickGUARD, shaping REWA's rent and rewards architecture, and contributing production fixes across Rust, TypeScript, and Python ecosystems.

IMPACT

13+

YEARS

10M+

DAILY TRANSACTIONS

40%

FEWER FALSE POSITIVES

Agentic AI

PRODUCTION SYSTEMS

Distributed

EVENT-DRIVEN DESIGN

Mobile + API

PLATFORM ARCHITECTURE

Open source

PUBLIC ENGINEERING

PROFESSIONAL EXPERIENCE

ClickGUARD

MAR 2021 - PRESENT

Head of Engineering

Leading engineering for an ad-fraud protection platform processing millions of daily transactions. Own technical strategy across agentic threat detection, event-driven services, cloud efficiency, and distributed-team execution.

- Built autonomous fraud detection for 10M+ daily transactions with sub-second latency.
- Reduced false positives by 40% using vector similarity and behavioral analysis.
- Introduced durable orchestration for multi-step threat mitigation workflows.
- Reduced cloud infrastructure cost by 60% through workload-aware scaling.

AGENTIC AI / PYTHON / KUBERNETES / VECTOR DATABASES / TYPESCRIPT

REWA

AUG 2025 - PRESENT

Senior Solution Architect

Leading solution architecture across REWA's tenant mobile app and backend platform for digital rent payments and loyalty rewards in the UAE.

- Unified Flutter, NestJS, Next.js, and Symfony surfaces through shared contracts.
- Designed resumable and idempotent payment, onboarding, lease, and identity journeys.
- Defined domain boundaries for tenants, landlords, leases, payments, rewards, and messaging.
- Aligned services, workers, and shared data models across product and operations teams.

FLUTTER / NESTJS / POSTGRESQL / REDIS / NEXT.JS / SYMFONY / AWS

CORE CAPABILITIES

AI & AUTOMATION

Agentic workflows / RAG
Vector search / Knowledge graphs

ARCHITECTURE

Distributed systems / Event design
Cloud platforms / Observability

PUBLIC ENGINEERING

Rust / TypeScript / Python
Frameworks / Developer tooling



CONSULTING & EARLIER EXPERIENCE

Waffle.Coach

JAN 2024 - PRESENT

Senior Software Architect - Consultant

Architecting an AI parenting assistant with retrieval, semantic memory, multimodal interaction, and privacy-first data systems.

- Built context-aware retrieval with sub-100ms latency across 100M+ vectors.
- Designed developmental-state tracking for personalized child-development insights.
- Created a hybrid edge-cloud architecture for responsive mobile experiences.

GENAI / MILVUS / ARANGODB / PYTHON / NESTJS / LLMS

Coredirection Health & Fitness

2022 - PRESENT

Technical Architect - Consultant

Designing event-driven architecture for health telemetry, real-time analytics, and scalable coaching experiences.

- Cut deployment cycles by 75% through event-driven microservices.
- Reduced read latency by 80% with CQRS and purpose-built read models.
- Delivered a leaderboard capable of millions of updates per minute.

EVENT SOURCING / KAFKA / CQRS / NESTJS / PYTHON

AlayaCare

JAN 2015 - JAN 2021

Senior Software Engineer

Helped move enterprise healthcare infrastructure from a PHP monolith to Python and NestJS services with GraphQL federation.

- Reduced scheduling conflict calculation time by 90%.
- Built a real-time patient monitoring experience using GraphQL subscriptions.
- Standardized API patterns across 20+ enterprise microservices.

GRAPHQL / MICROSERVICES / PYTHON / PHP / NESTJS / DDD

OPEN SOURCE

63

PUBLIC PULL REQUESTS

24

ECOSYSTEMS

OpenClaw

Routing, auth, channel, and CLI reliability

Prisma ORM

Driver edge cases and runtime safety

NestJS

Official sample test coverage

Keep

Nagios provider and real-time webhooks

Archestra

Groq and DeepSeek providers

ComfyUI

Widget event propagation fix

Cal.com

Booking and routing features

Coolify

SurrealDB service templates

CORE TECHNOLOGY

TypeScript, Python, Rust, Node.js, Go, PHP

NestJS, GraphQL, Symfony, Flutter, Next.js

PostgreSQL, Neo4j, Milvus, Qdrant, Prisma

Kafka, Kubernetes, Terraform, AWS

LINKS

[Portfolio >](#)

[GitHub >](#)

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SELECTED SYSTEMS

- Autonomous Enterprise Knowledge Graph
- OpenClaw Execution Engine
- Distributed Vector Search Platform
- Autonomous Fraud Prevention System