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SOFTWARE ARCHITECT / FULL-STACK ENGINEER / TECHNOLOGY ADVISOR

Muhammad Naveed Akram

20+

YEARS ENGINEERING

10+

YEARS AS ARCHITECT

50M+

USERS SCALED

10+

LANGUAGES SHIPPED

Software architect and full-stack engineer with **16+ years** turning ambitious ideas into systems that ship and last. I make the architectural calls that keep software fast, clean, and maintainable — and I lead lean, multicultural teams to build them without draining the passion out of the work. Platform- and language-agnostic by choice, with a system-design-first mindset — my communication-engineering foundation gives me a working command of the full system stack, from the physical, network and transport layers up till application layers, not just the top few top layers which most software engineers have command on. Separately, I'm deeply engaged in AI and data-science work, where strong algorithmic and analytical instincts do the heavy lifting. I take on the hard problems because I enjoy them, not because I have to.

// CORE COMPETENCIES

ARCHITECTURE	System Design · Solution Architecture · Microservices · Technical Strategy · Feasibility & Cost Modeling
LEADERSHIP	Team Building · Mentoring · Recruitment & Vetting · Cross-cultural Delivery · DevOps Supervision
LANGUAGES	JavaScript · Python · PHP · Ruby · Java · C# · Go · C / C++ · Swift
FRAMEWORKS	Node.js · Express · React · React Native · Redux · Django · Flask · Electron · Rails · Laravel · Play
DATA	PostgreSQL · MySQL · MongoDB · Elasticsearch · Redis · DynamoDB
CLOUD & DEVOPS	AWS (EC2, Lambda, RDS, S3, Route 53, SQS/SNS, Auto-Scaling) · GCP / App Engine · Nginx · Celery · RabbitMQ · CI/CD
FOCUS AREAS	AI-Enabled Products · Data Science · End-to-End Encryption · Security & Compliance
DOMAINS	EdTech · FinTech / Payments · Social Gaming · Construction-Tech · Marketplaces · SaaS Platforms

// EXPERIENCE

DQ Institute / DQ-Labs · Full-Stack & System-Design Engineer

Oct 2020 — Jan 2026

Singapore · Remote

- Core engineer in a compact team owning the full lifecycle — architecture, system design, development, and testing — for a global digital-intelligence education platform used by international partner coalitions.
- Led design and launch of AI-enabled products that generate personalized learning and employee-training programs, moving the platform from static content to adaptive, per-learner pathways.
- Architected IEEE-standard-aligned assessment systems that let existing client programs plug in cleanly.
- Implemented end-to-end encryption and industry-standard security/compliance, protecting sensitive institutional and minor-user data across the platform.
- Owned DevOps end to end — automated dev/staging deployments and auto-scaling production infrastructure — sustaining high availability with a deliberately lean team.

stack: Node.js, React, Python, PostgreSQL, AWS, CI/CD, End-to-End Encryption

16xBrains · Founder · Technical Advisor & Solution Architect

Jun 2020 — Present

Remote · Fractional / Contract

- Founded and run 16xBrains — a boutique practice delivering deep technical interventions, fractional engineering governance, and MVP acceleration for founders and product teams.
- Parachute into stalled or fast-scaling codebases to untangle architecture, set technical direction, and get delivery back on track — senior governance without the full-time headcount.
- Advise on technology selection, system design, and cost/feasibility trade-offs, then vet and finalize engineering hires so teams get the right people the first time.

The Entertainer · Software Architect

Jun 2019 — Aug 2020

UAE / Pakistan

- ▶ Conceived, architected, and led OneX — a Platform-as-a-Service that lets developers, designers, and non-technical users assemble, re-skin, and ship native iOS / Android / PWA apps from templates, with reusable service integrations and a roadmap toward full visual programming.
- ▶ Designed OneX's backbone: a flexible headless CMS and data-configuration layer paired with a granular, detailed access-control system — engineered so both visual and functional changes stay robust across every app generated on the platform.
- ▶ Owned the product vision end to end — built and recruited the engineering team, set delivery direction, and worked as both architect and hands-on product engineer.
- ▶ One of three architects safeguarding code quality across the wider platform, authoring the solution documents behind every critical change and leading system-design cleanups and future-proofing R&D with feasibility, time, and cost assessments.
- ▶ Pioneered Node.js and React / React Native adoption alongside a legacy PHP (Symfony, Yii) and Python-Flask estate on MySQL, MongoDB, and Elasticsearch, and advanced the migration toward microservices.

stack: Node.js, React, React Native, PHP (Symfony/Yii), Python/Flask, MySQL, MongoDB, Elasticsearch

16X-Brains · Full-Stack Engineer & Solutions Architect

Nov 2016 — Apr 2019

Pakistan

- ▶ Solo-architected and built a construction takeoff & cost/material estimation product (comparable to STACK) end to end — technology selection through MVP — delivering it in 12 months at 15–20 hrs/week.
- ▶ Built the backend and full AWS DevOps for a social mobile game that scaled to 5M+ registered users and 80K daily actives, keeping it stable under sustained load.
- ▶ Designed Crawler-as-a-Service, an automated web-data-extraction product, from concept through working prototype.
- ▶ Delivered on-demand full-stack consulting across Python, JavaScript, and AWS for a range of clients.

stack: React, Redux, Node.js, HTML Canvas, Python, Django, Electron, Webpack, AWS (EC2, ELB, S3, RDS, Serverless)

Dynamic-Logix / Experts-Cloud · Technology Advisor & AWS Consultant

Oct 2017 — May 2019

Pakistan · On-Demand

- ▶ Set the technical vision and strategic direction for a full-lifecycle software company, owning the product and client technology roadmap.
- ▶ Ran all DevOps and AWS infrastructure — EC2, Lambda, RDS, IAM, SES, S3, Route 53, ELB, CodeCommit — across in-house and client work.
- ▶ Mentored junior developers, sharpening their problem-solving and moving teams onto a modern React / Node.js / React Native stack.

stack: AWS (EC2, Lambda, RDS, IAM, S3, Route 53, ELB), React, Node.js, React Native, Linux

Go-Game · Senior Software Engineer

Jan 2016 — Nov 2016

Singapore

- ▶ Built goPay from scratch — an intelligent payment gateway that routes each transaction across providers using a financial-decision matrix — shipping the core services, three dashboards (admin, finance, developer), and Android + Unity SDKs.
- ▶ Coded all backend services and supervised the front-end and mobile developers delivering against them.
- ▶ Earlier built game-server backends on Java / Struts with AWS EC2 and RDS.

stack: Python, Django, RabbitMQ, Celery, Nginx, AWS (EC2, RDS, DynamoDB, S3, CloudFront, Auto-Scaling)

// EARLIER EXPERIENCE

Khaleef Technologies · Lead Server Programmer

Dec 2013 — Dec 2015

Pakistan

- ▶ Architected and owned Django backends for a themable/skinnable mobile game, a live cricket-scoring platform in the vein of CricInfo — later merged into the company's CricinGif product — and a mini-CMS serving content across a range of mobile apps.
- ▶ Built a full-featured multi-tenant SaaS for schools and colleges, including a college-builder and single-click subdomain creation with fully automated server setup, plus a Rails-based OLX/eBay-style buy-and-sell marketplace.
- ▶ Delivered four REST-API backends for mobile apps on Google App Engine, and ran all of the company's AWS operations — gunicorn/Nginx deployments, Supervisor process control, Celery + Redis async pipelines, and cron scheduling.

stack: Python, Django, Ruby on Rails, PostgreSQL, MySQL, Redis, Celery, Nginx, Google App Engine, AWS

GVS / DeNA · Senior Software Engineer

Sep 2011 — Dec 2013

Pakistan / Japan

- ▶ Built server-side logic for mobile social games — mostly on Google App Engine — for one of the region's established mobile social-gaming companies.
- ▶ Deployed to DeNA's Tokyo office for 3–4 months, shipping two projects on the Java Play framework: a REST API for a 3D mobile game with social, PvP, and events modules, and NFL-Matchups, an HTML5 server-side game that stayed among Japan's top-grossing apps for a long run.
- ▶ Worked on DeNA / ngmoco's closed-source Ng-Core gaming engine over Node.js, still trademarked under Mobage.

stack: Java (Play Framework), Google App Engine, Node.js (Ng-Core), REST APIs

TRG Tech · Analyst Software Engineer

Sep 2010 — Sep 2011

Pakistan

- ▶ Sole technology developer for a major telemarketing client — owned the database and built and automated the client reporting the account ran on.
- ▶ Automated manual processes with .NET services on the client's server machines, cutting human dependency while lifting throughput and accuracy, and turned around quick solutions as new requirements landed.

stack: C#.NET, VB.NET, SQL Server, MS Visual Studio

// EDUCATION

B.S. Telecommunication Engineering · NUCES-FAST

2006 — 2010

- ▶ GPA 3.33 / 4.00; awarded a full merit scholarship covering tuition and residence for all four years.
- ▶ Teaching Assistant for the Introduction to Computer Programming lab (2007), responsible for grading.
- ▶ Won a speed-programming competition against 50 teams (2009).