MUHAMMAD NAVEED

Senior Full-Stack Software Engineer

Backend · Frontend · APIs · Cloud · DevOps · Architecture

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PROFESSIONAL SUMMARY

Full-stack Software Engineer with 10+ years of experience building enterprise software across government, energy, healthcare, and IoT sectors. I started as a frontend engineer and gradually took on more of the stack — backend APIs, databases, cloud infrastructure, DevOps — until today I'm comfortable owning a software product end to end. At Elm Company in Riyadh, I work on the TAMM government platform as both a frontend architecture lead and a backend developer, using Angular, Java Spring Boot, and Node.js/NestJS to build and maintain services used by citizens and government staff at scale. I enjoy solving real engineering problems, writing code that others can maintain, and helping teams grow. I'm also incorporating AI-assisted development tools into my day-to-day workflow and find them genuinely useful for moving faster and reducing repetitive work.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript — primary; Java; Python; Go (working knowledge)

Frontend: Angular (expert), React (expert), RxJS, NgRx, HTML5, CSS3, SSR, PWAs, Svelte/SvelteKit (working knowledge)

Backend & APIs: Node.js, NestJS, Spring Boot; REST, GraphQL, WebSockets; JWT/OAuth2, RBAC; microservices, API versioning

Databases: PostgreSQL, MongoDB

Cloud & Infrastructure: AWS, Docker, Kubernetes, OpenShift

DevOps & Observability: GitHub Actions, GitLab CI; Datadog (dashboards, alerts, SLOs); performance profiling, CI/CD pipeline design

Architecture & Leadership: Component-based architecture, design systems, ADR & C4 documentation, code-review standards, technical mentoring

AI & Modern Tooling: GitHub Copilot, AI-assisted development (Claude, GPT); agentic workflow tools; Python ML stack: NumPy, Pandas, Scikit-learn, TensorFlow/Keras

Additional exposure: Golang, Ruby on Rails, Flutter, Swift, Kotlin

PROFESSIONAL EXPERIENCE

Elm Company — Riyadh, Saudi Arabia

Senior Software Developer (Full-Stack JavaScript) — Front-End Architecture Lead *Oct 2021 – Present*

- Work on the TAMM platform — a large-scale government digital services platform — as a full-stack developer and frontend architecture lead.
- Build and maintain backend APIs in Java Spring Boot and Node.js/NestJS that connect government systems and expose data to citizen-facing web applications. Use PostgreSQL and MongoDB depending on what each service needs.
- Own the frontend architecture for Angular and React products: the shared component library, design system, and the coding standards the team uses every day.
- Set up and maintain authentication across platform services using JWT and OAuth2, including role-based access control and API key management for third-party integrations.
- Added WebSocket support for real-time notifications and status updates across several platform features.
- Manage containerised deployments on AWS, Kubernetes, and OpenShift. Set up Datadog dashboards and alerts so the team can catch problems before they affect users.
- Rebuilt CI/CD pipelines using GitHub Actions and GitLab CI across product teams, cutting deployment time by around 30%.
- Performance work on both backend APIs and frontend bundles — profiling slow paths, improving caching, reducing bundle sizes — led to 20-25% improvements across several products.

- Mentor junior and mid-level engineers, run code reviews, and write architecture docs (decision records, system diagrams) so knowledge stays shared as the team grows.

LMKR — Islamabad, Pakistan

Software Developer (Frontend/Backend JavaScript) *Sep 2019 – Sep 2021*

- Worked on Halliburton's Digital Well Program — enterprise software used by drilling engineers for well planning and daily operations.
- Built backend services in Java Spring Boot and Node.js for core business logic and data processing, and Angular dashboards that engineers used to visualise and interact with well data.
- Designed REST and GraphQL APIs connecting the application to well data systems, with versioning so API changes didn't break existing clients.
- Used PostgreSQL for structured data and MongoDB for document storage across different parts of the system.
- Added real-time well monitoring through WebSocket streams, with retry and exponential backoff to handle unstable field network conditions.
- Consolidated multiple backend calls into a single aggregation layer, reducing API response times by around 15%.
- Refactored a legacy Node.js codebase into smaller, independently deployable services with shared libraries and CI templates, so multiple teams could work in parallel.

RISETech — Pakistan

Software Engineer (Frontend Heavy) *Dec 2016 – Aug 2019*

- Started my career building enterprise Angular and React applications for healthcare and IoT clients.
- Built authentication and role-based access control for healthcare monitoring and IoT device platforms — JWT, route guards, session management, secure API access.
- Developed real-time UI features using RxJS streams for healthcare dashboards and IoT device interfaces, with error handling and automatic retry built in.
- Replaced manual deployment processes with Docker pipelines, making environments consistent from development through to production.
- Used MongoDB for IoT data storage and AWS for cloud hosting and file storage.

SELECTED IMPACT

API Performance: ~15% faster API response times at LMKR by consolidating multiple backend calls into a single aggregation layer.

Deployment Velocity: ~30% shorter deployment cycles at Elm Company after rebuilding CI/CD pipelines across product teams.

System Performance: 20-25% improvements across several Elm products through backend and frontend profiling, caching, and bundle optimisation.

Security: JWT/OAuth2 and role-based access control implemented across enterprise products at Elm Company and LMKR.

Team & Architecture: Mentored engineers across two teams at Elm; architecture documentation and coding standards that made onboarding measurably faster.

ACADEMIC & TECHNICAL BACKGROUND

- During my BSc in Computer Science (PMAS UAAR UIIT, 2012-2016), I worked extensively with Python for machine learning and data analysis — NumPy and Pandas for data work, Scikit-learn for classification and regression, TensorFlow/Keras for neural network experiments.
- Completed a Coursera Machine Learning certification covering supervised learning, model evaluation, and applied deep learning in Python.
- In recent years I've been building familiarity with agentic AI tools and AI-assisted development workflows — using them to speed up routine coding tasks, explore new libraries faster, and think through architecture options. Not something I'd call a specialisation yet, but a genuinely useful part of how I work today.

EDUCATION

Bachelor of Science in Computer Science — PMAS UAAR UIIT (2012-2016)

CERTIFICATIONS

- Machine Learning — Coursera
- Angular Advanced — Pluralsight