

Talha Shafeeq

Software Engineer

Lahore, Pakistan

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Professional Summary

Full-stack Software Engineer with 4+ years of experience specializing in Node.js, NestJS, TypeScript, Python/Django, and React. Skilled in designing scalable RESTful APIs and microservices, building cloud-native solutions with AWS & Google Cloud, and optimizing geospatial and AI-driven applications. Experienced in real-time systems (WebSocket, Redis), Elasticsearch, and BigQuery pipelines. Passionate about clean architecture, AI-powered automation, and delivering high-performance applications.

Work Experience

Senior Software Engineer

CODE CLEVER, Lahore, Pakistan | Nov 2022 – Present

- Architected scalable microservices with NestJS, TypeScript, and Python/Django, delivering high-performance APIs for enterprise apps.
- Engineered real-time attendance management services with WebSocket & Redis, integrated into a React frontend.
- Built and deployed AI-powered SEO analysis system using DataForSEO API, BigQuery, and Elasticsearch, automating large-scale analytics pipelines.
- Deployed apps on AWS (EC2, S3, Route 53) and Google Cloud (BigQuery, Cloud Functions) with CI/CD (Docker, GitHub Actions).
- Enhanced GIS-based systems using QGIS, ArcGIS, and Node.js APIs for geospatial data processing.
- Improved backend performance by 30% through database optimizations and API load balancing with Nginx.

Associate Software Engineer

EMPG LABS, Lahore, Pakistan | Jan 2022 – Feb 2023

- Developed geospatial APIs for real estate platforms like Zameen.com, integrating Node.js, NestJS, and Django.
- Designed 3D floor plan visualization, 360° virtual tours, and spatial search APIs with React and Leaflet.js.
- Optimized Elasticsearch queries for property search, reducing latency and boosting engagement.
- Worked with PostgreSQL/PostGIS and MongoDB for geospatial data modeling and interactive property maps.

Node.js Developer

ALPHARAGES, Lahore, Pakistan | Oct 2021 – Dec 2021

- Built RESTful APIs with Node.js and Express, integrating PostgreSQL and MongoDB.
- Designed scalable data pipelines and backend integrations with AWS S3 and Heroku deployments.
- Transitioned from intern to key contributor in backend development.

Projects

Automated SEO Analysis Tool (Aug 2024 – Present)

- Automated Google search data ingestion with DataForSEO API & BigQuery.
- Built analytics backend with NestJS, Django, Elasticsearch, WebSockets, deployed on GCP & AWS.

Fleet Management Platform (Fleet Hopper) (Apr 2023 – Sep 2024)

- Designed backend with NestJS/TypeScript for route optimization & real-time driver tracking.
- Integrated GIS (QGIS, HERE Maps APIs) and WebSockets for live updates.

Geospatial Plot Finder API (Zameen.com) (Jan 2022 – Aug 2022)

- Built scalable property search system with Node.js, Django, React, and Elasticsearch.
- Enabled interactive spatial searches with Leaflet.js and ArcGIS.

Attendance Management Microservices (Nov 2022 – Jul 2023)

- Architected backend with NestJS & Django, using WebSockets for live updates.
- Integrated Elasticsearch & Redis for fast search and caching.

AI Chatbot Assistant (2024)

- Developed conversational AI assistant with Python (LangChain, Transformers) and integrated into React frontend.
- Deployed on AWS Lambda with API Gateway for scalable access.

Real-time Analytics Dashboard (2023)

- Built dashboard using NestJS, React, and WebSockets for real-time IoT data visualization.
- Integrated Redis, PostgreSQL, and Elasticsearch for high-performance data handling.

Skills & Qualifications

Backend Development: Node.js, NestJS, TypeScript, Python (Django, FastAPI), Express.js

Frontend Development: React.js, Next.js, Material UI

Databases & Search: PostgreSQL/PostGIS, MongoDB, TypeORM, Sequelize, Elasticsearch

Cloud & Infrastructure: AWS (S3, EC2, Route 53, Lambda), Google Cloud (BigQuery, Cloud Functions, AI APIs), Nginx, Docker, CI/CD

AI & Data: LangChain, OpenAI APIs, Hugging Face Transformers, Pandas, NumPy, Scikit-learn

Real-time & Messaging: WebSocket, Redis, Celery

Other Tools: GIS (QGIS, ArcGIS, Mapbox, Leaflet), SEO/Analytics tools, Git, Agile

Certifications

- AWS Certified Developer – Associate (2024)
- Google Cloud Professional Data Engineer (2024)
- DeepLearning.AI – Generative AI with Large Language Models (2024)
- Microsoft – AI Fundamentals (2023)
- Coursera – Machine Learning with Python (2023)
- Udemy – NestJS Zero to Hero (2022)
- Node.js Essential Training (2022)

Education

Bachelor of Science in Computer Science

Information Technology University, Lahore, Pakistan | 2017 – 2021