ZAIN AMJAD

Backend & Automation Engineer

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PROFESSIONAL SUMMARY

Results-driven Backend & Automation Engineer with hands-on experience building scalable REST APIs, multi-tenant architectures, and AI-powered automation pipelines. Proficient in Node.js, Express.js, Next.js, and LangChain, with proven ability to design secure authentication systems, database-driven business logic, and end-to-end workflow automation. Currently pursuing a BS in Computer Science at NUST (2023–2027).

TECHNICAL SKILLS

Backend & APIs: Node.js, Express.js, Next.js (API Routes), RESTful APIs, JWT Auth, bcrypt, Helmet.js, Rate Limiting
Automation & AI: LangChain, LangGraph, Google Gemini, RAG Pipelines, AI Agents, SQL Agents, WhatsApp Bot Automation, SMTP Automation
Databases: MongoDB (Mongoose), MySQL, PostgreSQL (Supabase), Firebase Firestore, Redis, Pinecone (Vector DB)
Frontend & Full-Stack: React.js, Next.js, TypeScript, Tailwind CSS, JavaScript, HTML/CSS
Cloud & DevOps: Oracle Cloud (OCI), AWS, Vercel, Cloudinary, Nginx, PM2, Docker, Git/GitHub, Linux (Ubuntu)
Security: XSS Protection, SQL Injection Prevention, CORS, httpOnly Cookies, Role-Based Access Control (RBAC)

WORK EXPERIENCE

Full Stack Developer | Globalist Media *Jul 2025 – Aug 2025 · Remote, US*

- Built and deployed production-grade full-stack features using Next.js and Amazon S3 for a US-based media company.
- Engineered server-side API routes for content management workflows, reducing manual data handling overhead.
- Integrated cloud storage pipelines with S3 for scalable media upload, retrieval, and delivery.

Executive | NUST Entrepreneurs Club *Feb 2025 – May 2025 · Islamabad, Pakistan*

- Delivered full-stack development support for club operations, automating workflows and event management processes.
- Collaborated cross-functionally to architect and deploy web platform features serving real student users.

KEY PROJECTS

Multi-Tenant Management System with AI-Powered SQL Agent | *React, Express.js, Node.js, MySQL, LangChain, JWT*

- Architected a multi-tenant backend with per-user MySQL connection pooling and tenant isolation for Pakistan Bait ul Mal.
- Built an AI SQL Agent using LangChain + Google Gemini Pro enabling natural language queries against live databases with read-only safety constraints.
- Engineered complex stipend calculation engine with CTEs, window functions, and ROW_NUMBER() family-ranking algorithms.
- Automated Excel report generation (ExcelJS) with dynamic sheet creation, formula calculations, and multi-sheet grand totals.
- Implemented JWT auth with httpOnly cookies, bcrypt hashing, refresh tokens, RBAC, Helmet.js, and rate limiting.

CityLink — Student Logistics & Community Automation Platform | *Next.js, Node.js, PostgreSQL, Supabase, Nginx, OCI*

- Engineered a hybrid cloud architecture bridging serverless Vercel frontends with stateful Oracle Cloud VMs via Nginx reverse proxy and custom UFW/IPtables firewall rules.
- Built automated WhatsApp group provisioning pipeline, reducing manual admin overhead by 100% on user registration.
- Designed .edu SMTP email verification system for institutional identity management and spam prevention.
- Implemented scalable PostgreSQL schemas for city-to-university matching with sub-second relational query performance.

LangChain AI-Powered Translator | *Node.js, Express.js, LangChain, Google Gemini*

- Built a production translator supporting 12+ languages using LangChain orchestration with Gemini as the LLM provider.
- Designed REST API endpoints with Express.js for structured JSON translation requests and integrated text-to-speech output.

Natours REST API | *Node.js, Express.js, MongoDB, Mongoose, JWT, Stripe*

- Built a full-featured tourism platform REST API with advanced query filtering, sorting, pagination, and field selection via a custom APIFeatures class.
- Integrated Stripe payment processing, Nodemailer/SendGrid email automation, Multer + Sharp image processing, and Mapbox geospatial data.

EDUCATION

Bachelor of Science, Computer Science *Sep 2023 – Sep 2027*
National University of Sciences and Technology (NUST), Islamabad | Grade: A | Skills: REST APIs, Node.js, React.js, JavaScript

CERTIFICATIONS

AI For Everyone — DeepLearning.AI (Jan 2025) **Javascript Essentials** — Cisco Networking Academy (Nov 2024)
Using Python to Access Web Data — University of Michigan (Jun 2025)
Start Writing Prompts like a Pro — Google (Jun 2025) **Learn Tailwind CSS** — Scrimba (Jun 2025) **Front End Development HTML** — Great Learning (Dec 2023)