Ahmed Baig

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Summary

Backend engineer with 3 years of experience building scalable, high-performance production APIs with Node.js/NestJS and Python on PostgreSQL. Strong in relational database performance, ETL pipelines, third-party API integration (Twilio, AWS, Gemini), containerized delivery (Docker, CI/CD), and hands-on LLM automation.

Education

National University of Computer and Emerging Sciences (FAST-NUCES) — Islamabad, Pakistan
Bachelor of Science in Computer Science — *2020 – 2024*

Technical Skills

Languages: TypeScript, JavaScript, Python, SQL
Backend & APIs: Node.js, NestJS, Express.js, Flask, REST API design, GraphQL, WebSockets, Swagger/OpenAPI
Systems: Idempotency, pagination, rate limiting, JWT auth, Redis caching, load optimization, testing (Jest), observability
Databases: PostgreSQL, PostGIS, Redis, MySQL, MongoDB, DynamoDB; ORMs: TypeORM, Sequelize
Cloud & AI: AWS (Lambda, Cognito, S3, DynamoDB), Docker, GitHub Actions, Terraform; LLM integration (Gemini), n8n

Experience

Backend Specialist — June 2025 – Present
BaKhabar Kissan (BKK) — *Islamabad, Pakistan*

- Building high-performance backend systems and APIs (Node.js, NestJS, Python) on PostgreSQL, with end-to-end database and system-flow architecture for scalability.
- Leading relational database performance optimization through profiling and query tuning, specializing in advanced SQL and PostGIS (Materialized Views, spatial indexing, complex Joins).
- Driving performance optimization across 9 projects; owning end-to-end backend architecture for 5 key projects and frontend for 3 portals (React/Next.js).

Full Stack Engineer — Aug 2024 – May 2025
QLU.ai — *Islamabad, Pakistan*

- Designed and built communication systems (calls, messaging) by integrating Twilio's third-party API, including callback/webhook handling for real-time events.
- Optimized API performance to handle 80,000+ data items in a single API call through algorithmic improvements and database optimizations.
- Developed production features with NestJS, React, React Query, and PostgreSQL, plus a real-time chat app on WebSockets (PERN).

Fellowship Associate - Backend — June 2024 – Aug 2024
Fasset — *Islamabad, Pakistan*

- Contributed to a **Flexible Transaction Fee System**, implementing fee calculation logic, JWT authentication, Redis caching, and input validation with Sequelize ORM (PostgreSQL).

Earlier: Teaching Assistant (Web Programming) @ FAST-NUCES; Backend Intern @ MRS Technologies (selected top 15 of 13,000); Web Intern @ Musketeers Tech.

Projects

Centralized Auth | *NestJS, TypeORM, PostgreSQL, JWT, Redis, Swagger, Jest, Docker*

- Built a centralized auth system with JWT token rotation, dashboard-scoped RBAC, multi-tenant partner isolation, API key management, and 65 automated E2E tests with rate limiting and request correlation tracing.

Sugarcane Monitoring Dashboard | *NestJS, TypeORM, PostgreSQL, PostGIS, Next.js, GeoServer, JWT*

- Built a multi-service geospatial platform (NestJS mill backend + field survey service) with PostGIS spatial queries serving 60K+ crop samples, multi-tenant RBAC, S3 image uploads with EXIF geotagging, and WMS dashboards.

Dialer – VoIP Communication Platform | *NestJS, PostgreSQL, Sequelize, Twilio, Socket.io*

- Built the backend for a VoIP platform integrating Twilio's third-party APIs for real-time calling, messaging, voicemail, and CSV contact upload, with AI-powered transcription endpoints.

Certifications

AWS: Serverless Knowledge Badge Assessment (2026)

AWS Academy Microservices and CI/CD Pipeline Builders (2024)

freeCodeCamp: JavaScript Algorithms and Data Structures (2022)

AWS: Introduction to Generative AI – Art of the Possible (2026)

freeCodeCamp: Back End Development and APIs (2023)

DataCamp: Introduction to Python (2022)