

SHIBIL MOHAMMED

Backend Engineer — Node.js & TypeScript

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Summary

Backend engineer who designs, builds, and ships production backend systems end-to-end: API design, database schema, background processing, caching, testing, and deployment. Independently built two full-scale platforms covering authentication, payments, async job queues, and sandboxed code execution, backed by 200+ automated tests and CI/CD pipelines. Comfortable taking a feature from requirement to production and debugging issues across the stack.

Technical Skills

- **Languages:** JavaScript (ES6+), TypeScript, SQL
- **Backend:** Node.js, Express.js, REST API Design, JWT Authentication, RBAC, Background Jobs (BullMQ), Request Validation (Zod)
- **Databases & Caching:** PostgreSQL, Prisma, MongoDB, Mongoose, Redis, Schema Design, Query Optimization
- **Testing & Quality:** Jest, Supertest, Unit & Integration Testing, Code Review
- **Cloud & DevOps:** AWS (Lambda, EC2), Docker, GitHub Actions (CI/CD), Vercel, Git
- **Frontend (supporting):** React.js, Zustand, TanStack Query, Tailwind CSS
- **Integrations:** Razorpay, Google Gemini API, GitHub OAuth, Postman

Experience

Software Developer — Bridgeon Solutions

Aug 2025 – Present

Calicut, Kerala, India

- Own backend feature work across authentication, payments, orders, notifications, and file uploads, translating product requirements directly into REST APIs and schema changes.
- Debug and fix issues across Node.js services, **MongoDB/PostgreSQL** queries, and third-party integrations, including performance and data-correctness problems found in testing.
- Wrote and maintain **200+ unit and integration tests** (Jest, Supertest) covering services, auth flows, and API workflows to catch regressions before deployment.
- Set up **Docker**-based environments and a **GitHub Actions** CI pipeline for type-checking, testing, and build verification; review teammates' code and contribute to schema and caching decisions.

Projects

ASCEND — Developer Skill Intelligence Platform

Live Demo · GitHub

- Designed and built the backend for a full-stack SaaS platform end-to-end: 10 modules, 50+ REST endpoints, layered controller/service/repository architecture with request validation.
- Moved slow work (GitHub repo scanning, skill-decay recalculation) off the request cycle using **BullMQ + Redis** background workers, keeping API responses fast under load.
- Designed a sandboxed code-execution service on **AWS Lambda** to safely run untrusted user-submitted JavaScript and Python, with isolated runtimes and execution timeouts, as a deliberate security boundary around the main server.
- Chose a dual-database architecture (MongoDB for flexible user data, PostgreSQL/Prisma for the relational Questions module) instead of defaulting to one database for everything, and can explain the trade-off.
- Built **200+ Jest/Supertest tests** across 21 suites and a **GitHub Actions** CI pipeline (type-check, test, build, Docker validation) so every change is verified before merge.
- Built a custom Redis stale-while-revalidate caching layer for high-traffic endpoints (leaderboard, dashboard) instead of relying on a third-party caching library.

DECIBEL — Full Stack E-Commerce Platform (MERN)

Live Demo · GitHub

- Built a MERN e-commerce platform with modular REST APIs for product catalog, cart, wishlist, orders, and admin, following an **MVC** architecture.
- Implemented the full order and payment workflow with **Razorpay**, including server-side payment verification so orders are confirmed only after a validated transaction.
- Built **JWT**-based authentication with email verification, password reset, and role-based access control, using bcrypt for password security.

Education

Bachelor of Computer Applications (BCA) — Bangalore City University

2022 – 2025