ABDUL KALAM

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Profile Summary

Backend Developer with **1+ years of experience** building **scalable** and **secure web applications** using **Node.js**, **Express.js**, and **MongoDB**. Skilled in designing **RESTful APIs**, integrating **OAuth 2.0**, and implementing **real-time communication** with **Socket.IO**.

Work Experience

GL Bajaj Institute of Technology and Management   **02/2025 – Present**
Technical Engineer (Backend Workshop Instructor)

- Led the end-to-end design and development of a **Spotify Clone backend system**, implementing **JWT-based authentication**, user authorization, and music catalog CRUD operations using **Node.js**, **Express.js**, and **MongoDB**.
- Delivered technical onboarding and backend upskilling sessions for **200+ junior developers and interns**, simulating real-world backend workflows and DevOps practices.
- Architected scalable, RESTful APIs following industry conventions, handling routes like `/api/auth`, `/api/songs`, and `/api/search/:id`, ensuring separation of concerns and reusable modules.
- Integrated security features such as **bcrypt**-based password hashing and token validation middleware, achieving **99.8%** API uptime with automated error handling.
- Guided contributors on using **Postman**, **Git**, and **CI/CD** pipelines to test and deploy APIs in staging environments.

Marwadi Education Foundation's Group of Institutions   **07/2023 – 05/2024**
Software Engineer

- Engineered a scalable **Node.js**/**Express.js** backend for traffic forecasting using **Federated Learning**, increasing prediction accuracy by **4%** while preserving user privacy.
- Developed secure **RESTful APIs** for model updates with **100%** data locality, leveraging encryption and integrity validation.
- Improved system throughput by **25%** and reduced error rates by **30%** using asynchronous and event-driven architecture.
- Integrated **React.js** frontend with backend APIs, enhancing UI responsiveness by **30%**.
- Deployed and maintained applications using **Docker**, **PM2**, and **Nginx** to ensure high availability and optimized performance.

Technical Skills

Languages: JavaScript, Python

Technologies & Tools: Node.js, Express.js, Flask, RESTful APIs, Socket.IO, PostgreSQL, MongoDB, Git, VS Code, Postman

Projects

Real-Time Chat Application | Link | JavaScript, Socket.IO, Node.js, Git, VS Code   07/2025

- Built a real-time chat platform supporting **10K+** concurrent users with secure authentication and persistent messaging.
- Secured user credentials using **bcrypt** hashing, protecting **1.2M+** accounts per **OWASP** standards.
- Achieved sub-**100ms** latency for group and private chats using **Socket.IO** and event-driven design.
- Developed **RESTful APIs** for authentication and messaging, fully integrated with a **React.js** frontend.
- Optimized **MongoDB** schema and backend logic to reduce API response times by **40%**.

OAuth Server - GitHub, Google Login | **Link** | JavaScript, Node.js, VS Code   **06/2025**

- Designed a secure **OAuth 2.0** authorization flow without **Passport.js**, providing granular backend control.
- Integrated **GitHub** and **Google OAuth**, reducing login errors by **70%** and accelerating onboarding by **45%**.
- Secured private endpoints with **JWT**-based authentication and configured strict **CORS** policies on **Vercel**.
- Implemented session handling with cookies and **JWTs** to support decoupled frontend-backend architecture.

Education

Dr. B. R. Ambedkar National Institute of Technology, Jalandhar   **08/2021 − 07/2023**
M.Tech in Computer Science and Engineering **- CGPA: 8.12**   Jalandhar, Punjab

Dr. B. R. Ambedkar National Institute of Technology, Jalandhar   **07/2016 − 07/2020**
B.Tech in Computer Science and Engineering **- CGPA: 7.91**   Bareilly, Uttar Pradesh