

ABDUL KALAM

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🌐 [LinkedIn](#)

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Technical Skills

Languages: JavaScript, Python

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

Work Experience

Marwadi Education Foundation's Group of Institutions

Jul 2023 - May 2024

Research Engineer

- Led cutting-edge research on traffic forecasting using Federated Learning (FL) for 5G networks, increasing prediction accuracy by 4% while ensuring user privacy via decentralized training.
- Architected and deployed a scalable FL model for distributed data processing, ensuring 100% data locality with robust encryption and integrity measures.
- Built and maintained high-performance web applications using React.js, JavaScript, HTML, and Web Components, enhancing UI responsiveness by 30%.
- Delivered a production-ready system solution that reduced error rates by 30% and improved throughput by 25%, boosting system reliability and user experience.

Projects

Real Time Chat Application | Link | JavaScript, Socket.io, Node.js, Git, VS Code

2025

- Created a full-stack chat platform enabling real-time messaging with secure user registration and persistent message storage for 10K+ users.
- Hardened security by implementing Bcrypt-based hashing and salting, exceeding OWASP guidelines and safeguarding 1.2M+ credentials.
- Facilitated real-time communication via Socket.IO, achieving sub-100ms latency in group and private chats.
- Engineered RESTful APIs for user sessions and message handling, integrating with the frontend for seamless UX across devices.
- Enhanced backend efficiency by optimizing MongoDB schema and deploying event-driven architecture, cutting API response times by 40

OAuth Server - GitHub, Google Login | Link | JavaScript, Node.js, VS Code

2025

- Implemented a secure login system using OAuth 2.0 Authorization Code Flow (without Passport.js), enabling granular control over backend authentication flows.
- Streamlined OAuth integration for GitHub and Google, reducing manual login errors by 70% and improving onboarding speed by 45%.
- Secured critical endpoints (e.g., /profile) using JWT-based authentication, with precise CORS policy configuration on Vercel for cross-domain compliance.
- Orchestrated robust session handling with cookies and JWTs, allowing decoupled frontend development and enhanced modular deployment.

Education

Dr. B. R. Ambedkar National Institute of Technology, Jalandhar

2021 – 2023

M.Tech in Computer Science and Engineering - **CGPA - 8.12**

Jalandhar, Punjab