MOHD SHAHZAN

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EDUCATION

Delhi Technological University	New Delhi, India
B.Tech	2022 – 2026	*CGPA:* 9.1
RSBV, Gandhi Nagar, Delhi	Delhi, India
Class XII (CBSE)	2021	94.4%
RSBV, Gandhi Nagar, Delhi	Delhi, India
Class X (CBSE)	2019	90.2%

PROJECTS

Excali Sketch : Real-Time Collaborative Canvas App — NextJs
- Engineered a **real-time** collaborative drawing tool using raw **HTML Canvas** and **WebSocket** integration, enabling synchronized sketching across multiple users with $< 100ms$ **latency**.
- Integrated **WebSockets** with an **Express** backend and room management for seamless multi-user collaboration.
- Deployed scalable backend via **Dockerized** Node.js services on **AWS EC2**, using **multi-stage builds** to optimize image size (reduced **by 65%**) and security.
- Configured **Nginx reverse proxy** with **SSL/TLS** for domain routing (*excali-sketch1.shop*)
- Utilized **Turborepo** for **Monorepo** management, built with **Next.js**, with frontend deployed on **Vercel** .
- Configured **Cloudflare** to block all unauthorized requests at the **DNS** level, reducing malicious traffic by **95%.** .
- **Links:** Live | GitHub | Demo

Academia Hub : Ed Tech Platform | MERN Stack
- Designed and developed **Academia Hub**, an educational platform featuring 30+ categories for creating and consuming content.
- Implemented scalable **user authentication**, **course management**, **Razorpay payment integration**, **Cloudinary media handling**, **Tailwind CSS**, and Markdown support for content formatting.
- Leveraged **Node.js**, **Express.js**, **MongoDB**, **JWT** ($JSONWebToken$), **Bcrypt** for password encryption (enhancing security by 80%), and **Mongoose** for streamlined database management.
- **Links:** Live | GitHub

School Management Backend | Python | GitHub
- Developed a **robust backend** system for a school management platform using **Python**.
- Achieved over 97% **test coverage** by implementing 30+ unit and integration **tests** with **pytest**, ensuring high code **quality** and **maintainability**.
- Utilized **Docker** to containerize the application, enabling **seamless deployment** and consistent development environments.

Advanced Library Management System: TypeScript Backend
- Built a robust backend for managing library operations using **Node.js**, **PostgreSQL**, and **Prisma**.
- Features: Authentication (**JWT**), role-based access control, borrowing limits, fine calculation, automated **email reminders** for overdue submissions (using a **Node-schedule**), CRUD operations, and **email verification**.
- **Links:** View Postman Documentation | GitHub

ACHIEVEMENTS AND AWARDS

Solved over 900+ **questions** on Data Structures and Algorithms.

Achieved a maximum Contest **Rating of** 1732 and ranked in the **top** 10% on LeetCode.

Ranked 1**st** in Class XII and Class X at school, demonstrating academic excellence.

TECHNICAL SKILLS

Course Work: Data Structures and Algorithms, Web Development, Object Oriented Programming, Database Management Systems, Operating Systems, Git.

Programming Languages/Tools : Java, JavaScript,Python , Pytest, TypeScript, NextJS, TurboRepo, MonoRepo, WebSockets, Tailwind CSS, MongoDB, Express, React.js, Prisma, PostgreSQL, Node.js, Git, Solana, Blockchain, Web3.js, Vercel ,Docker ,Ngnix , AWS(Amazon Web Service) ec2 ,DNS, CloudFlare.