

ABHIJAY KUMAR SHAH

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Education

Vellore Institute of Technology B.Tech in Computer Science & Engineering	Jul 2026 (Expected) CGPA: 8.43 / 10.0
DAV Public School, Dudhichua Senior Secondary (Class XII)	2019–2021 CGPA: 9.20 / 10.0
DAV Public School, Surya Vihar Secondary (Class X)	2018–2019 CGPA: 9.85 / 10.0

Technical Skills

Languages: C++, Python, JavaScript, SQL, HTML/CSS

Backend & Databases: Node.js, Express.js, REST APIs, WebSockets, MongoDB, PostgreSQL

Cloud, Tools & Networking: AWS (EC2, S3, Lambda), JWT Authentication, Docker, Git, Postman

Projects

Comfortable Stay — Hotel Plus Restaurant Alliance

HTML, CSS, JavaScript, Chart.js — Backend via External Services (MERN Planned)

[Link]

- Designed a QR-driven alliance platform improving discoverability for PGs and budget hotels via bill-based free stay eligibility.
- Implemented eligibility rules and room-tier allocation (waiting room, non-AC, AC beds) with dashboards and booking workflows.
- Extending the model to hospital partnerships for low-cost patient attendant stays.
- Planned backend migration to REST APIs, database-backed persistence, validation, and role-based access.

BACKEND STORE RATING PLATFORM

Node.js, Express.js, PostgreSQL, JWT

[Link]

- Designed and developed RESTful APIs with Node.js and Express.js to support role-based access for admins, users, and store owners.
- Implemented secure authentication and authorization using JWT, input validation, and role-based permissions (RBAC).
- Architected a normalized PostgreSQL schema enabling scalable store management, ratings, filtering, and sorting operations.

ENGLISH TUTOR AI

Node.js, Socket.IO, Web Speech API, OpenRouter (in progress)

[Link]

- Built a real-time backend system using Node.js and Socket.IO to handle bi-directional voice interactions.
- Integrated AI-powered language processing via OpenRouter for grammar correction, pronunciation feedback, and vocabulary enhancement.
- Implemented event-driven communication and session handling to support low-latency, multi-user interactions.

Advanced Multi-Video Player

JavaScript, Browser APIs, Performance Optimization — Windows and Mac OS

[Link]

- Engineered a multi-instance video playback system supporting up to 9 concurrent players, synchronized controls, and playback speeds up to 10x using optimized event handling.
- Implemented intelligent file validation and corruption detection, ensuring safe loading with real-time error reporting and recovery mechanisms.
- Designed resource-efficient state and memory management to maintain stable performance across Windows and macOS, including real-time performance monitoring and cleanup of unused media resources.

Leadership / Achievements

CatCatchCode

catcatchcode.online – Jul 2025 – Present

[Link]

Team Lead — VIT

- Founded an ed-tech initiative providing placement guidance, curated study material, and senior mentorship for students.
- Led a 5-member team to produce 100+ technical learning videos, impacting 100+ students.
- Designed beginner-to-intermediate learning roadmaps for DSA, Full-Stack development, and AI automation.
- Expanded content across LinkedIn, YouTube, Instagram, and GitHub, building an early-stage learning community.

Co-Founder & Project Lead, Satsang Vachan Satsang Seva

satsangvachansatsangseva.online – Sept 2025 – Present

[Link]

Digital Preservation & Social Impact Initiative

- Leading a digital preservation initiative to convert decades of archival literature into modern visual and multimedia formats.
- Spearheading a digitization initiative to preserve 50+ years of archival literature for a global community of 200 Million+ followers.
- Collaborating with contributors to produce posters, magazines, podcasts, and animated content for large-scale audiences.
- Applying AI-assisted summarization to transform long-form textual material into concise, accessible visuals.
- Designing a scalable content platform focused on accessibility, maintainability, and positive social impact.

Certifications

MERN Full Stack Certificate — Apr 2025 [Link]