Mohan Chaturvedi

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Education

Vellore Institute of Technology, B.Tech Computer Science and Engineering(Cloud Computing and Automation)   2022 - 2026
- CGPA: 7.75

City Montessori School, Indian School Certificate (ISC)   2022
- Grade: 92%

City Montessori School, Indian Certificate of Secondary Education (ICSE)   2020
- Grade: 92%

Technical Skills

Languages: Java, SQL, JavaScript, Python
Frameworks & Tools: React, MongoDB, MySQL, Spring Boot, REST API
Technologies: Amazon Web Services (AWS), Git

Projects

Banking System Application(Java, Spring Boot, Angular, MySQL)   December 2025
- Secured application resources as measured by 100% authentication coverage across backend endpoints by implementing Spring Security with JWT-based stateless validation filters.
- Enabled core financial operations as measured by the reliable execution of user signups, fund transfers, and profile updates by engineering a Java Spring Boot backend exposing 7 RESTful API endpoints.
- Orchestrated real-time user interface updates for account balances and transaction history by engineering a responsive Angular frontend consuming backend services, leading to a 15% decrease in page load times.
- Achieved 100% data transactional integrity and zero persistence errors by architecting a modular Controller-Service-DAO backend structure using Spring Data JPA for robust ACID compliance

Serenade – Music Player (TypeScript, React, Python, Flask, Express)   February 2025
- Orchestrated the development of a cross-platform desktop application, leveraging Electron to wrap a responsive React frontend and ensuring consistent native performance across Windows and Linux.
- Engineered a feature-rich media interface capable of handling complex user workflows, including concurrent downloads and real-time audio visualization, which reduced reported edge-case errors by 15%.
- Architected a robust Inter-Process Communication (IPC) bridge to seamlessly integrate the Python backend with the Electron frontend, reducing download latency by 40% compared to traditional API polling.
- Recognized as a winning project at FOSSHack 2025, demonstrating innovation and strong user-centric design.

Edustream-Backend API(Java, Spring Boot, PostgreSQL)   March 2024
- Engineered a scalable backend architecture as measured by the strict separation of concerns across 4 distinct application layers (Controller, Service, Repository, Entity) by developing a RESTful API using Spring Boot 3.2 and Java 17.
- Established secure stateless system access as measured by zero server-side session storage requirements by implementing JWT authentication with custom security filter chains and Spring Security.
- Facilitated granular content discovery as measured by the ability to perform case-insensitive partial matches across 5 distinct metadata fields (titles, descriptions, and content) by writing custom JPQL queries within Spring Data JPA.
- Orchestrated reliable cloud availability as measured by the seamless configuration switch between 2 database environments (local H2 vs. production PostgreSQL) by utilizing dynamic Spring Profiles and deploying to Railway.

Methodologies & Certifications

Methodologies: SOLID Principles, Object-Oriented Programing(OOP), Problem Solving and Data Structures.
Certifications: AWS Academy Cloud Foundations (AWS Academy Graduate), AWS Academy Cloud Architecting (AWS Academy Graduate)

Achievements & Recognition

- **FOSSHack2025 Winner:** Recognized for the project Serenade– Music Player.