AARAV AGARWAL

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EDUCATION

Vellore Institute of Technology   Bhopal, India
Bachelor of Technology in Computer Science   2023 – Present
Swaraj India Public School   Kanpur, India
Class X (92.6%) & Class XII (93.75%)   2021 – 2023

SKILLS

Languages: TypeScript, JavaScript, Python, Java, C++

Web Development: React.js, Next.js, Node.js, Express.js, HTML, TailwindCSS, REST APIs

Databases & ORMs: MongoDB, Mongoose, MySQL, Prisma, Drizzle, PostgreSQL

Cloud & DevOps: AWS (EC2, S3, Fargate, Lambda, IAM, ECS, ECR, RDS), Docker, Git, GitHub

Core Competencies: Agile Methodologies, Team Leadership, Algorithm Design & Optimization, Cross-Functional Communication, Project Management, Ownership Mindset

EXPERIENCE

SPIT Hackathon 2025   Mumbai, India
Quarter Finalist   Feb 2025
- Delivered a real-time, collaborative code editor using Next.js, Node.js, WebRTC, and Monaco Editor, providing a professional IDE experience.
- Integrated the Gemini API to provide intelligent, AI-powered code compilation and debugging, securing a quarter-finalist position among 50+ teams.

Bashcraft Club, Vellore Insstitute of Technology   Bhopal, India
Core Tech Team Member   2024 – Present
- Manage and maintain the official club website, improving uptime to 95% and ensuring high performance for over 250 student members.
- Spearheaded a UI/UX overhaul, boosting user engagement by 30% through a modern, responsive design with React, TailwindCSS and Shadcn Components.

PROJECTS

STREAMFLIX - Scalable Streaming Platform
- Constructed a group streaming service with subscription tiers and parental controls, achieving a 95% user satisfaction rate for feature usability.
- Implemented HLS-based adaptive bitrate streaming via FFmpeg and AWS S3, reducing average video buffering time by 40% across various networks.
- Mentored a team of 5 developers, increasing team productivity by 20% through agile practices; scaled to support an estimated 2000+ monthly users.

Buy Me A Cookie - Full-Stack Donation Platform
- Built a donation platform with secure Razorpay API integration, processing transactions with a 99.9% success rate.
- Developed a custom analytics dashboard to track donation trends, which helped increase repeat donor contributions by 15%.

Chat App - Real-Time Messaging Application
- Engineered a low-latency chat application using Socket.IO, achieving a sub-200ms message delivery speed for instant communication.
- Designed to handle over 150 concurrent users with minimal resource consumption, featuring image sharing and user presence tracking.

ACHIEVEMENTS & DSA

Cloud-Native Deployment: Spearheaded the cloud architecture for platforms on AWS, leveraging services like EC2, S3, Fargate, and DynamoDB to support a combined estimated 2500+ users with 99.9% uptime.

Machine Learning Certification: Achieved an Elite certification from NPTEL (IIT Madras) for the "Introduction to Machine Learning" course.

Algorithmic Design & Optimization: Solved 300+ LeetCode problems (150 Easy, 150 Medium, 10 Hard), 100+ CodeForces problems and consistently participate in their official contests.

Leadership & Collaboration: Guided a team of 5+ members on live projects, implementing agile principles and Git for version control to improve code quality and delivery speed by 25%.