

Adrivid Mishra

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Profile

Fourth-year B.Tech CSE (IoT Specialization) student at VIT Vellore (**CGPA 9.23/10**) and inventor of a granted Indian patent for an automated toll collection system. Focused on cloud infrastructure, real-time IoT edge systems, scalable backends, and applied AI, with a strong foundation in DSA, OS, Networks, and DBMS. Seeking a Software Development Engineer role to design and build reliable, high-performance systems.

Education

Vellore Institute of Technology, Vellore Aug 2023 – Aug 2027

B.Tech in Computer Science and Engineering (IoT Specialization) CGPA: **9.23/10**

Contai High School, Contai

2015 – 2023

Class X: **97.86%** | Class XII (PCM, CS): **88%**

Experience

Software Development Intern

May 2026 – Jun 2026

Alchemy Techsol India Private Limited ([Offer Letter](#), [Certificate](#))

- Developed and maintained backend modules and RESTful services for a production web application, collaborating with cross-functional engineers within Agile sprint cycles.
- Improved code quality by performing peer code reviews and systematic debugging under Git-based version control, gaining direct exposure to enterprise-grade SDLC practices.

Technical Skills

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

Core CS: Data Structures and Algorithms, OOP, Operating Systems, Computer Networks, DBMS

Backend & Web Development: Node.js, Express.js, REST API Design, React, HTML, CSS, JSON, Authentication

Databases: MySQL, MongoDB, Amazon RDS, Amazon Aurora

Cloud & DevOps: AWS (EC2, S3, RDS, ELB, Lambda), Docker, Git/GitHub, CI/CD, Linux, Scalable Infrastructure

Embedded Systems: Arduino, Raspberry Pi, ESP32, IoT Sensor Integration, Firmware Development

Software Engineering: SOLID Principles, System Design, Agile/Scrum, Scalable Architecture, Unit Testing, Postman

Certifications

AWS Certified Cloud Practitioner

[Credly](#)

Projects

AI Resume Generator Based on Job Description

[GitHub](#)

- Built an ATS-optimized resume generation pipeline by implementing NLP-based keyword extraction and semantic matching, aligning candidate resumes with target job descriptions.
- Automated skill-gap analysis and resume rewriting through prompt-engineered LLM calls, reducing manual tailoring effort per application.
- Designed a modular Python backend separating parsing, scoring, and generation logic to improve maintainability and support future feature extensions.

Vehicular Fog-Based Intelligent Health Monitoring System

[GitHub](#)

- Built a distributed IoT edge-cloud architecture with ESP32 sensors, MQTT brokers, and Raspberry Pi fog nodes to process real-time vehicle telemetry and generate sub-500ms failure alerts.
- Integrated edge AI models (Isolation Forest, TensorFlow Lite) on fog nodes for local anomaly detection, reducing cloud bandwidth usage by transmitting only processed event summaries.
- Developed an AWS-backed cloud layer (EC2, RDS, S3) and React dashboard with a digital twin for real-time analytics, fleet monitoring, and automated maintenance scheduling.

Higher Education Recommendation Chatbot

[GitHub](#)

- Engineered an AI-driven recommendation chatbot using cosine-similarity vector search and intent classification to rank higher-education institutes by student rank, interests, and academic profile, backed by a scalable, low-latency database query pipeline.

Achievements

Granted Indian Patent – Automated Toll Collection System Using CCTV-Based Number Plate Recognition

([Granted Patent](#))

- Designed and developed an automated toll system leveraging Raspberry Pi 3B+, Camera Module V2, OpenCV, EasyOCR, and a Flask/MySQL backend on Linux to capture and verify license plates in real time.
- Introduced a novel non-stop tolling mechanism enabling vehicles to pass at full highway speeds without stopping or slowing down, using high-speed edge image recognition and automated backend ledger debit.

Hackathons

Yantra 2026 – Central Hack, VIT Vellore ([Participation Certificate](#))

Feb 2026

- Built a blockchain-enabled crop supply chain traceability platform (theme: "Web3 for Social Responsibility") integrating IoT sensors, AI-driven quality assessment, and smart contracts.
- Proposed a geofenced harvest verification mechanism binding crop data to QR-based IDs for tamper-proof traceability.