

Mallika Manish Rajpal

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EDUCATION

Vellore Institute of Technology

Bachelor of Technology in Computer Science

CGPA: 8.54

Sept. 2022 – Present

TECHNICAL SKILLS

Languages: C++, Python, Java, JavaScript, HTML, CSS

AI/ML: NLP, Scikit-Learn, Ensemble Models, Pandas, NumPy

Backend Systems: Node.js, Express.js, RESTful APIs, Microservices

Databases: MongoDB, MySQL, PostgreSQL

DevOps & Cloud: Git, CI/CD, Docker (Basic), Render, Vercel, AWS (Familiar)

Core Skills: Data Structures & Algorithms, Debugging & Performance Optimization

PROJECTS

Juno — Chatbot for Women's Legal & Safety Support | *Dialogflow ES, Node.js, Express.js* May 2025

- Designed an NLP-based chatbot providing legal, health, and safety guidance, validated through 100+ test dialogues.
- Implemented custom intent and entity recognition, improving contextual understanding and reducing fallback cases.
- Enabled cross-platform access via iframe embedding and deployed on Render, achieving **99.8%** uptime.
- Optimized response flows and backend routing, reducing average query-processing latency and improving user experience.

Doctor's Aid — ML-Powered Hospital Automation System | *Django, React.js, REST APIs, Python* April 2025

- Built a stacking ensemble model for diabetes prediction using Logistic Regression, Random Forest, and XGBoost, achieving **77.27% accuracy**.
- Integrated the model with a Django backend to deliver real-time predictions for **500+ patient profiles**.
- Optimized scheduling workflows through improved algorithms and query optimization, reducing wait times by **35%**.
- Enhanced system reliability by implementing robust API validation and streamlined data pipelines between the ML model and the hospital management modules.

CodeSage — Intelligent Static Code Reviewer | *Python (FastAPI), AST, Pylint, Flake8, Bandit* Jan 2025

- Built two core microservices — **Syntax Analysis** and **Style & Best Practices** — using AST parsing and linting tools to detect dead code, unused variables, and PEP8 issues.
- Integrated both services with the API Gateway using structured JSON outputs, enabling parallel processing and fast analysis.
- Developed scalable backend logic in FastAPI for reliable inter-service communication and low-latency responses.
- Improved overall code-review accuracy by integrating service outputs into the unified reporting pipeline used in 100+ test submissions.

CERTIFICATIONS

- IBM: DevOps, Agile & Design Thinking
- SmartBridge: Full Stack Development

ACHIEVEMENTS & LEADERSHIP

- Solved **600+** DSA problems on LeetCode; ranked in the **Top 20% globally** (Contest Rating: 1443).
- Served as the **Design Team Member** for the GeeksforGeeks Campus Club, hosting multiple events and leading the design of posters and branding assets using Figma and Canva, boosting event participation by **30%** and engaging 200+ students.