

# 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.