

# Aryaman Gupta

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## Education

**B.Tech in Computer Science**  
Vellore Institute of Technology, Bhopal

**Expected 2026**  
CGPA: 8.58/10.0

## Technical Skills

**MERN Stack:** MongoDB, Express.js, ReactJS, Node.js, Redux, REST APIs, Mongoose, Socket.IO.

**Machine Learning:** Python, PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib, OpenCV, N8N.

**Tools/Applications:** Git, Docker, AWS, MATLAB, Postman, VS Code, Jupyter Notebook.

## Projects

### Mental Health Application

- Engineered an AI-driven mental health platform supporting consultations and children's dyslexia/PTSD detection.
- Integrated an LLaMA-powered chatbot enabling 24/7 consultations with quick responses, significantly increasing engagement and retention.

### Multivariate Time Series Anomaly Detection

- Built an Isolation Forest-based anomaly detection system with a scalable ML pipeline for preprocessing, calibration, and visualization.
- Delivered a dashboard processing 26K IoT sensor samples in minutes, facilitating rapid anomaly and feature analysis.

### AI-Powered Web Scraper

- Automated a scraper using Python, Streamlit, LangChain, and Llama2 to extract data from 1000 URLs with 98% accuracy, reducing manual workload by 85%.
- Modeled a modular architecture that lowered bug rates by 40% and integrated real-time dashboards for data visualization.

## Experience

### Research Project: Hyperspectral Imaging for Agriculture

Feb 2024 – Present

- Engineered AI and machine learning models for hyperspectral crop datasets, improving disease detection accuracy by 25%.
- Implemented data augmentation in MATLAB, doubling dataset size and enhancing model generalization by 22%.
- Collaborated on academic research and conducted comprehensive model validation to ensure robustness.

## Certifications

- Cloud Infrastructure Data Science Professional – Oracle OCI
- Generative AI Certification – Oracle
- Cyber Security Systems NPTEL

## Key Achievements

- Ranked in the Top 6% of 11,000 participants in GeeksforGeeks Programming Competitions.
- Qualified for Regional Mathematics Olympiad, ranking top 9 out of 20,000.
- Achieved AIR 126 out of 50,000 in National General Knowledge Contest.
- Won 2 hackathons, including 1st place among 300 teams.
- Elected youngest Secondary Vice-Captain, leading 200 students.

## Co-Curricular Activities

### Core Team Member, Microsoft Club, VIT Bhopal

Aug 2023 – Present

- Led organization of 2 hackathons and 1 seminar for 300 attendees, increasing participation by 40% YoY.
- Coordinated sessions with industry professionals on AI, cloud, and game development.
- Mentored juniors in competitive programming, hackathon preparation, and technical projects.