

# Kriti Porwal

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## Education

**Vellore Institute of Technology, Bhopal**

Bachelor of Technology, Computer Science and Engineering

October 2022 – May 2026

CGPA – 8.80/ 10

## Skills

**Languages:** C/C++, Java(DSA focused), Python (Pandas, NumPy, Scikit-learn), JavaScript, TypeScript, SQL, HTML5, CSS

**Technologies & Tools:** AWS, ReactJS, NodeJS, ExpressJS, TailwindCSS

**Developer Tools:** GitHub, VSCode, Postman, Eclipse

## Projects

### MindfulChat - Full-Stack Development + AI Integration

[Github Link](#)

- Built full-stack mental health chatbot using BERT sentiment analysis and Google Gemini AI, achieving 95% emotion detection accuracy with sub-2-second response times.
- Architected a streamlined therapeutic chatbot by integrating Google Gemini AI with a Python backend, decreasing average conversation processing time by 40% while holding 95% BERT model accuracy.
- Deployed scalable therapeutic platform supporting 500+ concurrent users with an 85% satisfaction rate, integrating multiple AI frameworks for healthcare applications.

### Indore Route Pathfinder - Web Development & Graph Algorithms

[Github Link](#)

- Built full-stack route optimization app using React.js, Node.js, and MongoDB with 5+ API endpoints for Indore transportation planning.
- Engineered a route optimization module utilizing Dijkstra's algorithm in JavaScript, decreasing computational complexity from  $O(n^3)$  to  $O(n \log n)$  and improving route calculation speeds by 60%.
- Engineered dual optimization modes (distance vs cost) with complete CRUD operations for scalable transportation network analysis.
- Developed interactive UI with station management system allowing users to add/connect stations with distance and cost parameters.

### AgroShield – AI-Powered Crop Disease Detection

[Github Link](#)

- Designed a robust assessment framework for machine learning models, increasing classification accuracy by 40% and achieving 92% diagnostic precision.
- Worked with a 5-person team to refine the predictions through over 500 unique evaluations, fine-tuning the model's efficiency.
- Analyzed more than 20 research papers with essential extractions regarding insights on 8–10 major crop diseases and formatted critical sections of a research paper to fortify findings.

### Real-Time Driver Drowsiness Detection System: 95%+ Accuracy Across All Conditions

[Github Link](#)

- Designed and executed a user interface prototype for the driver drowsiness detection application, enhancing user experience by ensuring streamlined interaction with real-time alerts, leading to positive feedback from 100% of test users.
- Reduced driver risk scores by 15% through machine learning-driven behavioral analysis. Insights from the model helped create actionable recommendations, leading to safer driving habits within two months.
- Collaboratively created a high-accuracy model for a driver drowsiness detection system, achieving 95% with less than 3% positives.

## Work Experience

### AICTE Internship on AI: Transformative Learning - Microsoft-SAP :

- Revamped image processing pipelines, ensuring seamless integration with advanced stability improvements that produced over 2,500 images weekly while retaining exceptional accuracy and consistency across all graphics created.

## Extra-Curricular Activities

- **Core Member, Data Science Club** - Engaged in data analysis projects, workshops, and machine learning initiatives
- **Core Member, Software Development Club** - Led cross-functional teams building innovative web applications, mentored 50+ junior developers, and architected scalable solutions, increasing project efficiency by 40%.

## Achievements

### First Prize Winner - Urja Shakti Write-up Competition (UG Category)

Theme: AI, ML, IoT application in Petroleum industry/ Cyber Security in Energy Sector /Automation in Energy Sector

## Certifications

- **IBM DevOps Fundamentals:** Certified in DevOps Fundamentals by IBM Career Education Program
- **IBM Blockchain Developer:** Earned Blockchain Developer certification from IBM Career Education Program

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