

Kartik Vats

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About

3rd-year IT student at NIT Kurukshetra specializing in full-stack development, cloud deployment, and AI-driven applications. Experienced in building scalable web systems, low-latency real-time features, and responsive, accessible user interfaces. **Portfolio**

EDUCATION

- B.Tech in Computer Science** 2023–Present
NIT Kurukshetra CGPA: 8.1

EXPERIENCE

- Developer at NIT Website** Jun 2024 – Present
ISSAC, NIT Kurukshetra
 - Developed and optimized the institute’s official website using **Next.js**, improving page load speeds by up to **2–3x** through SSR and SSG.
 - Enhanced website performance and SEO with Next.js image optimization and dynamic routing, improving experience for **2,000+ monthly visitors**.
 - Collaborated with faculty and peers to deploy on Vercel with CI/CD for scalable cloud deployment.

PROJECTS

- Smart Allotment Portal – NIT KKR** 2025
MERN Stack
 - Officially used by NIT Kurukshetra
 - Automated subject allotment system used by **4,000+ students in the first week**.
 - Reduced manual processing time from **3 hours to under 10 minutes**.
 - Optimized MongoDB queries to handle **20,000+ allotments in parallel**.
 - Live Demo
- RevenueSense – Financial Forecasting Dashboard** 2025
MERN Stack, Flask, Python (scikit-learn)
 - Engineered a financial dashboard using the **MERN stack** with a **Flask-based ML API**, ensuring **99%+ data integrity**.
 - Developed forecasting models achieving an **R² score of 0.85**, improving prediction accuracy by **100–400%**.
 - Enabled data-driven decisions, reducing forecasting errors by **30%+** and improving budgeting efficiency by **200%+**.
 - Tech Stack:** React.js, Redux, Node.js, Express.js, MongoDB, Python (scikit-learn, pandas, numpy), Flask.
 - Live Demo
- CodeHelper – AI Code Review Assistant** 2025
Next.js, Node.js, Gemini API
 - Developed an AI-powered tool that analyzes user-submitted code and provides detailed feedback on **logic, readability, and optimization**.
 - Integrated **Gemini API** to evaluate and generate **personalized improvement suggestions** and highlight code strengths in real time.
 - Optimized backend to handle **500+ code review requests/day** with an average response time under **2 seconds**.
 - Designed an intuitive interface for developers to instantly compare their code’s **before and after quality metrics**.
 - Live Demo

TECHNICAL SKILLS

Frontend: HTML, CSS (Tailwind, Bootstrap), JavaScript (ES6+), React, Next.js, Redux, Framer Motion
Backend: Node.js, Express, NestJS, MongoDB, PostgreSQL, MySQL, REST, GraphQL, Firebase, Socket.IO, WebRTC
Languages: C, C++, Java, Python, TypeScript, SQL, Bash
Cloud & Deployment: Vercel, Render, Netlify, Docker, GitHub Actions (CI/CD), AWS (EC2, S3 basics)
Testing: Jest, Postman, Mocha/Chai
Tools: Git/GitHub, Colab, Jupyter, VS Code, Figma

ACHIEVEMENTS

National Finalist – Smart India Hackathon (2024)
Finalist – Israeli-India Hackathon, Thapar (2025)
Completed IBM Summer Virtual Internship Program (2025)