

# Kartik Vats

B.Tech in Computer Science and Engineering  
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## About

3<sup>rd</sup>-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
  - 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
- Chai – Crowdfunding Social App** 2025  
Next.js, NextAuth, WebRTC
  - Built a social platform with Google/GitHub authentication via NextAuth.
  - Designed friend request and real-time chat system using **Socket.IO**, supporting **200+ concurrent users**.
  - Implemented **video and voice calling over WebRTC**, tested with **100+ active sessions**.
  - 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 **R<sup>2</sup> 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

## 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)