

# VINAY KUMAR

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## SUMMARY

Final-year B.Tech student in Computer Science (AI & ML) with a CGPA of 8.88, experienced in MERN stack development, cloud deployments, and DevOps fundamentals. Skilled in building scalable web applications and working with modern development tools. Possesses foundational knowledge in Machine Learning and a strong understanding of Data Structures & Algorithms. Passionate about developing efficient, real-world solutions and continuously improving technical expertise.

## EDUCATION

### VIT BHOPAL UNIVERSITY

Bachelor of Technology, Computer Science & Engineering (AI & ML)

Cumulative GPA: 8.88

Bhopal, MP  
Sept 2023 - Present

### VIDYA BAL BHAWAN SCHOOL

Intermediate (Class 12th): 86%

Delhi, India  
April 2023

### MAYO INTERNATIONAL SCHOOL

High School (Class 10th): 85%

Delhi, India  
April 2021

## PROJECTS

### VeggieMap — Hyperlocal Vegetable Vendor Finder

[GitHub](#) | [Live](#)

- Real-time hyperlocal marketplace:** Engineered a live vendor map using MongoDB 2dsphere geospatial indexing and Socket.io Geo-Room partitioning for scalable location broadcasts.
- Advanced Frontend:** Deployed as a PWA with Supercluster marker clustering, utilizing Zustand and TanStack Query for optimized state management.

Stack: Next.js 16, TypeScript, Node.js, Express, MongoDB, Socket.io, PM2, Nginx

### system-ctrl — Server Health Monitoring Dashboard

[GitHub](#) | [Live](#)

- Real-time Monitoring:** Built a dashboard tracking CPU, Memory, and Network metrics via systeminformation with live in-browser log streaming and authenticated restarts.
- Infrastructure:** Managed server-side workflows using Nginx and external service pings to ensure maximum system availability and monitoring.

Stack: Next.js, TypeScript, Tailwind CSS v4, Shadcn UI, systeminformation, PM2, Nginx

### EventSnap — Facial Recognition Photo Retrieval

- Backend Engineering:** Developed a secure retrieval system using JWT and Firebase Auth, optimizing MongoDB for high-speed facial recognition queries.
- UX Optimization:** Enabled attendees to find their event photos instantly through automated matching logic and efficient database retrieval.

Stack: Node.js, Express.js, MongoDB, JWT, Firebase, Facial Recognition APIs

### Brainly — Personal Knowledge Management Hub

[GitHub](#) | [Live](#)

- Full-stack Knowledge Hub:** Designed a platform for organizing YouTube links, articles, and notes with Google OAuth and Email/OTP auth via Resend.
- Dynamic UI:** Implemented drag-and-drop cards and a bug-report admin dashboard using React 19 and Framer Motion for enhanced UX.

Stack: React 19, TypeScript, Vite, Node.js, Express, MongoDB, Tailwind CSS, Framer Motion

## TECHNICAL SKILLS

Languages:	C++, Python, JavaScript, TypeScript
Web Technologies:	MERN Stack, Next.js, Tailwind CSS, Shadcn UI, Socket.io, REST APIs
Cloud & DevOps:	AWS (EC2), Docker, PM2, Nginx, Linux, Git, CI/CD
Databases:	MongoDB, PostgreSQL, SQL, Firebase
Machine Learning:	NumPy, Pandas, Scikit-learn, Foundational Models

## CERTIFICATIONS

AWS Certified Cloud Practitioner — Amazon Web Services

[Link](#)

Cloud Computing — NPTEL, IIT Madras

## ACHIEVEMENTS & ACTIVITIES

- Coding:** Solved 250+ problems on LeetCode, showcasing strong DSA and problem-solving skills.
- Leadership:** Active member of the university PR and Outreach team, managing community engagement.
- Technical Migration:** Led successful project migration to AWS EC2, ensuring 100% service availability.