

Vinayak Agrawal

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SUMMARY

Product-minded engineer, 10 months out of college, already shipped real things for real users. Built a fitness platform, co-founded a software agency, and delivered a live computer vision system for a paying client. I write code, think about the product, and figure out what actually needs to be built. Looking to join a small team where all three matter.

EDUCATION

- **BMS College of Engineering, Bangalore** 2021 – 2025
Bachelor of Engineering in Electronics and Communication CGPA: 7.5 / 10.0

EXPERIENCE

- **Independent Builder** Aug 2025 – Present
Product Engineer Remote
 - **Built solo:** Three products shipped from scratch with no team. Handled everything myself: scoping, design, frontend, backend, deployment.
 - **Client work:** A turf owner came to me with a vague brief about wanting stats from his footage. I figured out what he actually needed, designed the full system, and built it.
 - **Co-founded NSS Soft:** Set up a software agency with a partner. Built the product site, wrote the positioning, set pricing, and got early clients across India and internationally.
- **K4 Media & Technologies LLP** May 2025 – Jul 2025
Web Development Intern, Ed-Tech Startup Remote
 - **Shipped features:** Built and maintained production web apps for educational content delivery on a weekly release cycle.
 - **Full-stack work:** Worked across frontend and backend, picked up the codebase fast, and shipped without much hand-holding.

PROJECTS

- **Football Analytics System** | Python, YOLOv26, ByteTrack, OpenCV, React private repo, client project
 - **What it does:** Ingests live camera footage from an indoor turf and tracks players in real time, detects possession, and generates movement heatmaps.
 - **Team separation:** Separated teams by jersey colour using HSV clustering with no manual labelling needed.
 - **Field calibration:** Used OpenCV homography to map camera coordinates onto a 2D pitch. Had to handle a striped surface, an ad banner blocking part of the frame, and a ball that shows up as roughly 8px in footage.
 - **Dashboard:** React frontend for the client to see player positions, sprint distances, and possession stats live. Designed for someone non-technical.
- **Manaura Fitness Platform** | Next.js 14, TypeScript, Tailwind CSS, Framer Motion manaurafitness.com
 - **Live product:** Production platform for a fitness brand handling class registrations, community engagement, and content delivery.
 - **Product call:** Chose WhatsApp and Google Forms over building custom flows. Shipped faster and the client got something working in days, not weeks.
- **NSS Soft, Software Agency** | Next.js, TypeScript, Tailwind CSS, Vercel nsssoft-in.vercel.app
 - **0 to 1:** Built the full go-to-market site: service pages, case studies, two-tier pricing, and a Cal.com booking flow to convert visitors into calls.
- **Multimodal Sentiment Analysis** | Python, PyTorch, Hugging Face, OpenCV github.com
 - **Built from scratch:** Combined transformer NLP, 3D CNNs for video, and audio feature extraction into one sentiment scoring pipeline. Trained and orchestrated entirely solo.

SKILLS

- **Languages:** TypeScript, JavaScript, Python, SQL
- **Frontend:** React, Next.js, Tailwind CSS, Shadcn UI, Framer Motion, HTML5, CSS3
- **Backend:** Node.js, Express.js, REST APIs, PostgreSQL, MongoDB, SQLite, Supabase
- **AI / ML:** PyTorch, Hugging Face, YOLOv26, ByteTrack, OpenCV, Generative AI
- **Tools & Cloud:** Git, GitHub, AWS (EC2, S3), Vercel, Docker, Postman