Aayush Solanke

aayushsolanke@gmail.com | 8669861578 | LinkedIn | GitHub | Portfolio

Education

K.J. Somaiya School of Engineering, Mumbai — Aug 2023 – Present
B.Tech Information Technology | CGPA: **9.41**
Honours in Artificial Intelligence | CGPA: **9.85** — July 2024 – Present
Class 10 (SSC): 98.8% — 2021

Work Experience

Research Intern – Deep Learning & Computer Vision — May 2025 – Jul 2025
K.J. Somaiya School of Engineering — Mumbai (On-Site)

- Engineered an archaeological CV pipeline achieving **89.2% IoU** on rock art segmentation; utilized TensorFlow (EfficientNet) and OpenCV to extract robust feature embeddings, outperforming classical CV baselines by 12%.
- Developed an end-to-end Streamlit application integrated with FAISS vector similarity search and a SQLite backend, enabling automated batch-labeling and COCO exports that reduced manual annotation time by **40%**.

Projects

WarrantyVault: Full-Stack SaaS & AI Document Parser — *Next.js 14, FastAPI, MongoDB* GitHub | Live | Jan 2026

- **Full-stack SaaS platform** integrating a Next.js/Express.js web app with a FastAPI AI microservice; engineered a hybrid document extraction pipeline (PaddleOCR + Donut Transformer) achieving **91%+ accuracy** on invoices, featuring automated Node-Cron email alerts.

StayShare: Flatmate Finder Platform — *MERN, Tailwind CSS, Passport.js* GitHub | Live | Feb 2025

- **Scalable full-stack application** for property discovery and roommate matching; engineered a secure Node.js/Express backend with Passport.js (JWT), RBAC, validation, and custom rate-limiting middleware.

CloudOptix: FinOps Decision-Support System — *React, Node.js, Express, MongoDB* GitHub | Live | Mar 2026

- **Professional-grade cloud proxy system** optimizing resource allocation across AWS, Azure, and GCP; implemented asynchronous dynamic polling of the Azure Retail Prices API, caching time-series metrics in MongoDB to power real-time React FinOps dashboards.

BarkBank: Pet FinTech & Health Platform — *React, Tailwind CSS, ES6, OOP* GitHub | Live | Apr 2026

- **Comprehensive Object-Oriented React platform** centralizing medical insurance tracking and emergency savings vaults; engineered a robust ES6 architecture utilizing the Context API and polymorphism to seamlessly manage complex frontend state and financial logic.

Skills

Languages:	Python, SQL, Java, JavaScript
AI / ML & CV:	PyTorch, TensorFlow, OpenCV, YOLOv8
Data & Analytics:	Pandas, NumPy, Seaborn, Matplotlib
Web & Backend:	React, Next.js, FastAPI, Node.js, Express, Streamlit
Databases & Tools:	MySQL, PostgreSQL, MongoDB, Git, Docker, Qiskit, Vercel

Honors & Achievements

Special Mention — Dimension X Hackathon — *DY Patil University* — Feb 2026

- Built **PranAIR**: Real-time GPS drone dispatch system with BLIP scene triage, hospital alerts, and a quantum-inspired QUBO/Ising TSP solver for multi-patient routing (FastAPI, React, Gemini API, Qiskit).

Smart India Hackathon — Qualified Round 1 and advanced to 24-hour hackathon — 2025
Top 15% of Branch — B.Tech Information Technology, K.J. Somaiya School of Engineering — 2023 – Present
Gold Medalist — IMO, NSO, IEO (3 Consecutive Years) — 2016 – 2018
District Topper — Class 10 SSC (98.8%) — 2021

Leadership

Team Lead — Gate (AI Intrusion Detection System) — Mumbai (On-Site)
K.J. Somaiya School of Engineering | *External Major Project* — Jan 2026 – Present

- Leading a 4-member software team to build an edge-native predictive security pipeline for an external client; delivering a zero-cloud YOLOv8 and XGBoost intent prediction suite designed for seamless handoff and integration into the company's embedded Linux hardware (3MP sensor, PTZ, 4G LTE).