

Akash Ramanni

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Education

JD College of Engineering & Management <i>Bachelor of Technology, Major in Information Technology – CGPA: 8.90</i>	Nov.2022 – June 2026 <i>Nagpur, Maharashtra</i>
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Experience

DRDO (Defence Lab) <i>Paid Internship</i>	August 2025 – Feb.2026 <i>Jodhpur, Rajasthan</i>
<ul style="list-style-type: none">- Developed two offline, standalone AI-based desktop applications for defense-oriented image analysis using Python. (<i>Defence Aircraft Contour Detection System and Shadow removal with Image Pre-Processing System</i>). [Project]- Developed an Aircraft Contour Detection system leveraging Segment Anything Model (SAM) by Meta and OpenCV to accurately extract aircraft outer-body contours and to save the contours in csv format. Built an interactive Tkinter GUI with manual refinement tools such as free-draw, erase, bend, and contour editing for precise user control.- Developed a Shadow Removal and Image Pre-Processing System using PyTorch-based deep learning models (DC-ShadowNet and diffusion-based techniques) to remove shadows from aircraft images, with integrated tools for noise removal, image upscaling, and quality enhancement with an interactive Tkinter GUI.- Packaged both applications into fully offline executable (.exe) files using PyInstaller, enabling secure deployment on air-gapped systems.- Completed a 6-month onsite paid internship at Defence Research and Development Organization (DRDO) – Defence Laboratory, Jodhpur.	

Visvesvaraya National Institute of Technology <i>Summer Research Intern</i>	June 2025 – July 2025 <i>Nagpur, Maharashtra</i>
<ul style="list-style-type: none">- Conducted research on speech-driven video summarization for long-form broadcast news by analyzing unsupervised transformer self-attention-based ([CLS]-token) textual segmentation over ASR transcripts, integrating CNN-based visual cues for boundary refinement, and studying BART-based summarization, resulting in a co-authored paper submitted to the IEEE Guwahati Subsection Conference 2026 (GCON 2026) via Microsoft CMT.	

Infosys Springboard Virtual Internship 6.0 <i>Python Developer Intern</i>	Dec.2025 – Feb.2026 <i>Virtually Online, India</i>
<ul style="list-style-type: none">- Developed a full-stack trade finance platform enabling tamper-proof document and transaction tracking- Built a FastAPI REST API with modular routers for auth, documents, ledger, and transactions- Implemented JWT-based authentication with role- and org-level access control- Designed PostgreSQL schemas for documents, ledger entries, trades, and audit logs- Implemented document upload + SHA-256 hashing with immutable ledger records- Developed ledger explorer APIs for lifecycle tracking and integrity verification. [Project]	

Technical Skills

Languages: Python (Computer Vision and Machine Learning), SQL, JavaScript

Frontend Technologies: ReactJS, NextJS, TailwindCSS

Developer Tools: Git, GitHub, Postman, Figma, Google Cloud Platform, VS Code, Visual Studio, PyCharm

Databases: REST API, Fast API, Google Firebase, MongoDB Atlas, MySQL, Appwrite

Libraries: Pandas, NumPy, Matplotlib, Pytorch, OpenCV

Projects

TalentIQ - Remote Interview Platform | *React, Node.js, MongoDB, WebRTC, Tailwind CSS*

- Developed a full-stack MERN-based remote interview platform with real-time coding and video sessions
- Built a VS Code-like in-browser code editor with real-time execution and session isolation
- Implemented WebRTC-based 1-on-1 video rooms with mic/camera controls and screen sharing
- Designed REST APIs for session management, problems, submissions, and dashboards
- Implemented authentication and authorization with secure session handling
- Built problem management and live dashboards for interview analytics and tracking