# Akash Ramanni

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## Education

**JD College of Engineering & Management** **Nov.2022 – June 2026**
*Bachelor of Technology, Major in Information Technology – CGPA: 8.90* *Nagpur,Maharashtra*

## Experience

**DRDO (Defence Lab)** **August 2025 – Feb.2026**
*Paid Internship* *Jodhpur, Rajasthan*

- Developed two offline, standalone AI-based desktop applications for defense-oriented image analysis using Python. *(Defence Aircraft Contour Detection System and Shadow removal with Image Pre-Processing System).* [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** **June 2025 – July 2025**
*Summer Research Intern* *Nagpur, Maharashtra*

- 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** **Dec.2025 – Feb.2026**
*Python Developer Intern* *Virtually Online, India*

- 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 (Compter 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, Tensorflow, 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