

Tanishk Rajhans Sarode

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Education

National Institute of Technology, Rourkela

Nov 2022 – Present

Bachelor of Technology in Computer Science and Engineering (CGPA: 7.12/10)

Rourkela, Odisha

Relevant Coursework

- Computer Vision
- Database Systems
- Data Structures & Algorithms
- Operating Systems
- Computer Networks
- Object-Oriented Programming

Work Experience

AI Agent Intern – Gristip Software

May 2025 – Present

Nagpur, Maharashtra (Full-time, 1-month intensive internship)

- Achieved **92% query-response accuracy** (+22% vs. prior benchmarks) using **LangChain** and **OpenAI GPT**, automating 50+ daily document tasks.
- Reduced deployment time by 40% via Docker and CI/CD pipelines (GitHub Actions), enabling scalable agent rollouts for 3+ enterprise clients.
- Built **15+ prompt templates** and integrated **Pinecone** vector DB in a Retrieval-Augmented Generation (RAG) framework, improving semantic search relevance by 35%.

Projects

Pothole Detection System (Ongoing)

Apr 2025 – Present

YOLOv8, OpenCV, Flask, Docker

GitHub

- Deployed **fine-tuned YOLOv8** (85% precision/82% recall) with OpenCV adaptive thresholding, reducing civic response time by 35% via GPS-tagged severity classification.
- Designed a Flask dashboard with DBSCAN clustering to prioritize repairs, projected to cut city-wide backlog by 25%.
- Achieved 95% API uptime under load testing (Locust) using Dockerized CI/CD pipelines (GitHub Actions).

Road Repair Tracking System (RRTS)

Mar 2025 – Apr 2025

Flask, GIS, Docker, JWT

GitHub

- Engineered a GIS-integrated Flask app with dynamic triage, resolving 10k+ simulated reports 40% faster via REST APIs and SQLAlchemy ORM.
- Reduced admin workload by 30% using RBAC-enabled dashboards with Redis caching and automated batch processing.
- Deployed scalable architecture (Nginx, JWT) handling 100 RPM in Dockerized environments.

Technical Skills

- **AI/ML:** PyTorch, TensorFlow, LangChain, OpenAI GPT, HuggingFace, YOLOv8
- **Computer Vision:** OpenCV, CNN, Object Detection, MediaPipe
- **Backend:** Flask, FastAPI, Docker, PostgreSQL, REST APIs, AWS (EC2, S3)
- **Programming:** Python, JavaScript, SQL, Git, Kubernetes

Extracurricular Activities

Nitrutsav 2024 – NIT Rourkela

Dec 2023 – Feb 2024

Sponsorship Coordinator

- Secured partnerships worth **Rs. 5L+** from 20+ brands (incl. Fortune 500), driving event attendance to 10,000+ through multi-channel campaigns.

Athletics Team – NIT Rourkela

Nov 2022 – Present

Middle-Distance Runner & Peer Mentor

- Ranked top 15% in Inter-NIT Championships (2022, 2023); mentored 15+ athletes, improving team race times by 18% via data-driven training plans.