

# HRUSHIKESH ANAND SARANGI

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## Education

National Institute of Technology, Rourkela

Bachelor of Technology in Industrial Design

September 2023 – Present

Rourkela, Odisha

Guru Nanak Public School, Sambalpur

CBSE, Science (PCM)

May 2023

Sambalpur, Odisha

## Relevant Coursework

- Distributed Systems
- Operating Systems
- Data Structure and Algorithms
- Computer Networks
- DBMS
- Cloud Computing

## Work Experience

N6T Technologies

Jun 2025 – Aug 2025

Full Stack Intern

Rourkela, Odisha

- Engineered a Full-Stack EHR integration with **Sysmex Analyzers**, fully automating lab data entry to **eliminate** manual transcription errors and ensure data integrity.
- Directed client-side troubleshooting and deployment in a **production environment**, translating clinical requirements into software patches to maintain system stability.

## Projects

Oxide

Feb 2026

Rust, Axum, Nix, Pingora, Docker, PostgreSQL

GitHub

- Designed and implemented a **self-hosted application deployment platform** in **Rust**, separating build reproducibility (**Nix**) and runtime isolation (**Docker**) into distinct pipeline stages.
- Built a **Pingora-based reverse proxy** in Rust for programmatic **HTTP traffic routing** to containerized deployments, replacing configuration-driven alternatives such as nginx.
- Architected a **multi-crate Cargo workspace** across layered modules (API, builder, runtime, proxy, controller, domain) following **clean architecture** principles with **Axum** for async HTTP endpoints.

Polynotes

March 2026

Rust, Tauri 2.0, whisper.cpp, SolidJS, WebRTC-VAD

GitHub

- Integrated **whisper.cpp** into a **Rust/Tauri 2.0** desktop app via native **FFI** (bindgen + cc) for fully on-device, offline real-time lecture transcription.
- Implemented a **WebRTC VAD** gate in Rust to filter silence before whisper inference, reducing redundant **ML calls** and eliminating hallucination on non-speech audio.
- Built per-segment **multilingual language detection** to handle Hindi-English code-switching in Indian academic speech, with a **SolidJS** frontend over a low-latency **Tauri IPC** event stream.

Identiq

Nov 2025

Next.js, Flask, Node.js, MongoDB, FaceNet, DeepFace, Gemini AI, Real-Time Messaging Protocol (RTMP)

GitHub

- Engineered FaceNet AI matching engine with DeepFace, cutting timelines by 90 percent via two-way linkage for missing persons and UIDB.
- Architected a low-latency **IoT Edge** network on **Raspberry Pi** using **RTMP**, achieving **sub-second (¡1s)** real-time facial verification and video streaming.
- Developed a **Next.js** command dashboard integrated with **Gemini AI** to generate automated case resolution analytics and real-time geospatial visualizations.

## Achievements/Certifications

- **IEEE Medhamanthan 2025** June 2025  
Secured 3rd place at IEEE Medhamanthan 2025 for a cost-effective AI-based leukemia detection system. Certificate
- **Baker Hughes Virtual Hackathon 2025** October 2025  
Achieved Finalist status (Top 7) in the Baker Hughes Hackathon 2025 by engineering 'Smart Sentry,' a multi-phase anomaly detector that improved fault identification accuracy by 86 percent across 3 distinct turbofan operational states. Certificate

## Technical Skills

- **Languages:** Rust, Python, TypeScript, C++, Bash
- **Operating Systems:** Ubuntu, Linux
- **Developer Tools:** Git, Docker, Nix, cargo, bindgen, CMake, Postman, VS Code, IntelliJ IDEA
- **Cloud & Infrastructure:** Terraform, Grafana, Prometheus, GitHub Actions, Kubernetes
- **Technologies/Frameworks:** Tauri, SolidJS, Axum, Pingora, WebRTC VAD, whisper.cpp, Next.js, Flask, FastAPI, MongoDB, MySQL, SQLite, Tailwind CSS

## Extracurricular Activities

AIChE NIT Rourkela

June 2025 – Present

Web Development Head

NIT Rourkela

- Maintained and optimized the official club website, improving load speed by 25% .