# SHIS KUMAR MISHRA

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## **EDUCATION**

## National Institute of Technology, Rourkela

Nov 2022 - Present

Bachelor of Technology in Electronics and Instrumentation Engineering (CGPA - 8.85)

Rourkela, Odisha

#### RELEVANT COURSEWORK

• Data Structures and Algorithms

- Web Development
- Database Management System
- Object Oriented Programming
- System Design
- Operating System

- Computer Networks
- Machine and Deep Learning

## WORK EXPERIENCE

# National Institute Of Technology, Rourkela

May 2025 - July 2025

Machine Learning Intern

GitHub | Website

- Preprocessed EEG dataset handling missing values, signal artifacts, and class imbalance; engineered 48+ clinical features including spectral entropy and Hjorth parameters.
- Optimized ML pipeline achieving 84.02% accuracy and 0.840 F1-score with XGBoost, implementing comprehensive error handling and artifact detection protocols.
- Built interactive Streamlit web application for real-time EEG prediction with rankings and medical visualization

#### PROJECTS

### EduCRAFT — Course Navigator

Sept 2024 - Feb 2025

NextJS, React, Neon DB, Google's AI, Drizzle ORM, YouTube API, AceternityUI, Vapi

 $GitHub \mid Website$ 

- A course navigator that auto-generates YT lessons, notes, & links via prompts—cutting manual search time by 40%
- Engineered a mock interview tool with real-time voice Q&A using Vapi, achieving 95% feedback accuracy.
- Launched a PDF assistant enabling contextual Q&A & note generation—boosting document comprehension by 60%
- Implemented a **credit-based billing** system with dynamic usage tracking, supporting feature activations via clerk.

# MediSCAN AI — Intelligent Health Diagnosis Assistant

Nov 2024 - Mar 2025

Streamlit, GroqAI, BrightData MCP, Multilmodal LLM, Gradio, ffmpeg, PortAudio, Pinecone

GitHub | Website

- Applied 4 DL models to detect heart disease, diabetes, parkinson's, and breast cancer over 92% confidence.
- Enabled real-time voice & image-based diagnosis, letting users speak symptoms or upload scans for instant analysis
- Processed 10+ prescriptions by mapping symptoms to medical context using Semantic search & generative AI.
- Scraped 50+ health updates from Reddit & Forums with brightData MCP for trend detection and voice playback

# ACHIEVEMENTS

- Team Ping Masters Cisco Code with Hackathon Finalist (3<sup>rd</sup> out of 72 Teams) Aug 2025 Developed a quantum-classical hybrid network topology using NetworkX with link modeling. Github | Website Implemented quantum physics constraints including exponential decoherence effects, no-cloning theorem, entanglement distribution protocols, and quantum state fidelity modeling with distance-based loss simulation. Engineered advanced Dijkstra routing with reliability assessment and quantum repeater optimization.
- GoFlow Atom Mail ISM Dhanbad Hackathon (5<sup>th</sup> out of 80 Teams) Apr 2025 Led an intelligent gmail-integrated assistant to organize, fetch, and summarize inbox content. Github | Website Designed auto-generated replies with Gemini AI using tone-aware, predictive response generation. Certificate Integrated semantic search on 1000+ emails using **nomic embed text** (embeddings) and **pinecone** (vector DB).
- GeeksforGeeks Institute Lifetime Rank 8 with 800+ questions solved Achieved 8<sup>th</sup> lifetime rank among NIT Rourkela students with a Geek Coding Score of 2700+.

Dec 2024

RankList

## CERTIFICATIONS

 Certified in Machine Learning, Deep Learning and NLP Skilled in ML models, deep learning, and NLP applications.

Jan 2025 Certificate

• Certified Web Developer and Java Programmer Proficient in building responsive, scalable web applications and advanced Java programming. Certificate1 Certificate2

May 2024

# TECHNICAL SKILLS

- Languages: Java, Python, JavaScript, SQL Databases: MySQL, MongoDB, PostgreSQL
- Developer Tools: VS Code, Jupyter Notebook, Git, Google Colab, Intellij IDEA
- Libraries/Frameworks: Node.js, Express.js, React.js, JavaScript, Next.js, Rest API, Shaden UI, Firebase