Nushka Singh

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SUMMARY

Third-year undergraduate student pursuing Bachelors in Mathematics and Computing from BIT Mesra, Ranchi. Passionate about Machine Learning, Data Science, and Software Engineering. Currently working on impactful ML projects involving satellite imagery and predictive analytics. Actively solving algorithmic problems on LeetCode and exploring opportunities to work on scalable systems. Seeking a Summer Internship at Google to contribute and grow in an engineering-focused environment.

EDUCATION

Birla Institute of Technology, Mesra

IMSc in Mathematics and Computing

CGPA: 8.8/10 Jul 2023 - May 2028

Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming (OOP), Database Management Systems (DBMS), Operating Systems, Linear Algebra, Probability and Statistics, Machine Learning

SKILLS

Languages: C++,Python, Java, SQL

Frameworks: Tensorflow, PyTorch, Pandas, scikit-learn, OpenCV, Flask

Tools: Git, GitLFS, Linux, Jupyter, LaTeX, VS Code

Interests: Machine Learning, Deep Learning, Full-Stack Development, Competitive Programming

Projects

AI Career Coach (Capstone Project)

(GitHub Repo)

Personalized chatbot for career quidance, built using LLMs, RAG, and prompt engineering.

- Built an AI-powered chatbot using LangChain, LLMs, and Vector Databases to provide real-time career guidance.
- Implemented Retrieval-Augmented Generation (RAG) pipeline for personalized job advice, resume feedback, and market insights.
- Designed context-aware prompts and used few-shot learning to handle diverse user queries effectively.
- Deployed the application using **Streamlit** with a clean UI and Git LFS for model management.

End-to-End Pneumonia Detection System

(GitHub Repo)

Deep learning project for medical image classification and deployment

- Trained a CNN with TensorFlow to detect pneumonia from chest X-rays.
- Achieved **94%** validation accuracy on public datasets.
- Deployed using Flask and Streamlit for web-based inference.
- Managed large files efficiently using **Git LFS**.

Internships

${\bf Machine\ Learning\ Intern-BCCL\ Dhanbad}$

Jun 2025 - Present

- Built a predictive ML pipeline for coal quality classification using real-time drill sensor data.
- Collaborated with field engineers and data engineers to improve model deployment and sensor calibration.
- Certificate of Internship

ACHIEVEMENTS

- Solved 250+ problems on LeetCode using C++ (focused on DP, Backtracking, Binary Search)
- Earned the Algorithm I badge for algorithmic proficiency
- Maintained a **50-day coding streak** on LeetCode
- Achieved a **contest rating of 1578** (Top 26% globally)

LEADERSHIP AND ACTIVITIES

Member, Data Science Club — BIT Mesra

2025 - Present

- Led hands-on workshops on Python for Data Science and mentored junior projects. Volunteer, NSS BIT Mesra

- Participated in social outreach and tech literacy campaigns for rural students.

2023 - 2024