Nyasha Ojha

7617213258 | nyashao2910@gmail.com | LinkedIn

Education

Bachelor of technology in Computer Science and Engineering *Expected May 2026*

VIT Bhopal University CGPA: 8.17

Relevant Coursework: Data Structures & Algorithms, Java programming, Machine Learning, System Design, Database Management Systems

Skills

- **Programming Languages:** Java (Core Java, Multithreading), Python, SQL (PostgreSQL/MySQL, MongoDB).
- **Core Engineering & Fundamentals:** Object-Oriented Programming (OOP), Data Structures & Algorithms, System Design
- **Web & Backend Frameworks:** HTML, CSS, JavaScript, Spring Boot, Flask, Streamlit, REST API design, FastAPI
- **DevOps & CI/CD:** CI/CD pipeline implementation (GitHub Actions), Microservices, AWS (Cloud Services), Git
- **Data & Analytics:** Scikit-learn, Pandas, NumPy, Time-Series Analysis, Flask, Streamlit

Languages: English, Hindi, Telugu, Bengali

Projects

Urban Planning Using Remote Sensing Imagery

Geospatial AI, Data Engineering, Analytics

- Led a 10-member cross-functional team to build scalable geospatial forecasting pipelines using 556+ multi-source satellite datasets for urban growth and land-use prediction.
- Engineered end-to-end Python + ML pipelines (visualizations feature extraction, spatial modeling), improving forecasting accuracy by ~20% and reducing manual geospatial processing time.
- Delivered data-driven reports, providing security using AWS, enabling policymakers to make informed decisions on zoning, infrastructure planning, and resource allocation.

Java Log File Processor

Software Engineering, Automation, Data Processing

- Built a Java CLI tool for high-volume log parsing, reducing analysis time and improving data processing scalability.
- Implemented optimized search algorithms, efficient buffered I/O, and structured error handling for reliability.
- Applied modular OOP design supporting future integration into enterprise monitoring workflows.

Java Command Line Application for Log File Processing | Software Engineering, Automation

- Developed a dependable Command-Line Interface (CLI) application focused on efficient Java I/O for large-scale log file parsing and data extraction.
- Implemented advanced Regular Expressions (Regex) and search algorithms to filter, aggregate, and classify log entries, demonstrating problem-solving skills.
- Created a resilient application using best practices in Core Java, Exception Handling, and File Handling for production-ready quality assurance processes.

Research Experience

Post-Quantum Blockchain Research — *Journal of Data Science and Mathematical Cryptography (JDMSC), July 2025*

- Co-authored a peer-reviewed paper proposing a hybrid lattice-based cryptographic algorithm integrating subset generation with SVP to improve resistance against quantum attacks.
- Enhanced algorithmic efficiency in post-quantum blockchain security models, contributing to future-proof cryptographic systems.

Awards and Achievements

- Founder & Core Member, Developer's Club: Managed 27-member team, led 2 projects, organized events for 210+ attendees, boosting engagement by 40%.
- Merit Scholarships (10th & 12th grade) for academic excellence; NCO Level 2 and NSO Level 2 qualified.
- Core debate team member; refined public speaking, critical thinking, and persuasive communication skills.

Interests

Certified drummer (3 years, Rock School of London), state level youth boxing participant, and an avid follower of Formula 1 racing