

# RITVIK BHARDWAJ

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## EDUCATION

B.Tech. (Computer Science and Engineering)	2022-2026	Netaji Subhas University of Technology, Delhi	7.65/10
CBSE (Class XII)	2022	Maxfort School Dwarka	92.8%
CBSE (Class X)	2020	Maxfort School Dwarka	92.4%

## INTERNSHIPS

### Full Stack Developer Intern | Bytical | Gurugram

(June 2025 – June 2025)

- Implemented a full-stack RAG pipeline for a sales automation platform - chunked and embedded multi-document PDFs, retrieved relevant context using cosine similarity, and passed it to an LLM for precise, low-latency responses. Also developed a UI for multi-document uploads with complete CRUD operations, ensuring that adding/removing documents dynamically updates context in the vector store and chatbot responses.  
*Tech Stack:* React.js, Node.js, FastAPI, Azure Blob Storage, OpenAI API, MongoDB.

### Machine Learning Intern | Defence Research and Development Organization (DRDO) | New Delhi

(December 2024 - March 2025)

- Designed a CNN-based face anti-spoofing system to detect real vs. fake faces using the LCC\_FASD dataset; deployed the model via Flask API and integrated with a React.js frontend for simulation.
- Collaborated on Quantum ML research by building classical ML models for result benchmarking and performance comparison with quantum algorithms.  
*Tech Stack:* TensorFlow (CNN), Flask, React.js, Python

### Software Engineering Intern | Calidad Infotech | Ahmedabad

(July 2024 - Aug 2024)

- Built an AI-powered Training Tool to onboard new employees through interactive domain-specific quizzes (e.g., Data Analysis, ML), featuring both text and speech-based answering. Integrated real-time speech-to-text, AI-generated feedback, and personalized performance reports.  
*Tech Stack:* React.js, Node.js, Express.js, MongoDB, OpenAI API, Azure Speech Services, JWT

### Software Engineering Intern | Maruti Suzuki India Limited (MSIL) | Gurugram

(June 2024 - June 2024)

- Built a full-stack Attendance Management System for contract-based employees where users can log in, mark attendance, and view reports — with real-time geolocation tracking and secure JWT-based authentication.  
*Tech Stack:* React.js, Node.js, Express.js, MongoDB, JWT, Geolocation API
- Built a web app (MQVC) for Market Quality Vendor Conventions, enabling vendors to sign up, log in securely, and access conference details and event agendas.  
*Features:* User authentication, vendor onboarding, real-time event detail retrieval from backend.  
*Tech Stack:* React.js, Node.js, Express.js, MongoDB, JWT

## ACADEMIC PROJECTS / INTERNSHIPS

**Research Intern – IIT Ropar** : improved classic shortest path methods (like Dijkstra and A\*) to find routes that are not just fast but also balanced and fair, using Python and graph data.

**Full Stack Intern – IIT Delhi** : Built a smart health assistant in JavaScript that analyzes CBC reports and uses Gemini API to predict potential diseases — bridging AI with real-world diagnostics.

**Medical Dashboard – Personal Project**: Developed a full-stack Medical Dashboard using React, Node.js, Express, and MongoDB to manage patient data and streamline Mediclaim approvals. Integrated JWT-based authentication for secure, role-specific access, built RESTful APIs for patient operations, and added search functionality by mobile number. Designed a responsive, user-friendly interface with Bootstrap and implemented robust error handling for seamless usability across devices. [GitHub Repository](#)

**Fake Job Posting Detection System**: Built a full-stack web application to assess the authenticity of job postings using a deep learning-based ANN model with TensorFlow. Integrated NLP for vectorizing textual features and one-hot encoding for categorical data. Designed a React-Vite frontend with a Node.js/Express backend and MongoDB for storage, and FlaskAPI to serve the neural network model. Implemented a unique 2FA system combining JWT/Google OAuth with a custom NLP-based sentiment authenticator that prompts users to write a restaurant review and verifies it using LSTM sentiment analysis model. [Frontend GitHub Repository](#) , [Backend GitHub Repository](#) , [Machine Learning Part GitHub Repository](#)

## SKILLS

- Frontend Development (ReactJS, NextJS), DBMS (MongoDB), Backend Development (NodeJS, ExpressJS), Machine Learning, NLP, Deep Learning, DFD Design, Implementing SDLC Principles, RAG (Retrieval Augmented Generation) pipeline

## CERTIFICATIONS

- Postman API Fundamentals Student Expert: Credential ID - 667ac8534209491ca2d0616e
- Accenture Nordics – Software Engineering Job Simulation: Credential ID – SnDGcAzhvqnALf7dM