



RITAM MONDAL | 23IM30018

B.Tech.(Hons.) in INDUSTRIAL ENGINEERING and M.Tech. in INDUSTRIAL ENGG.
AND MANAGEMENT



[Github](#) [Linkedin](#) email: ritamm134@gmail.com | ph: 9433307446 | DOB: 06/01/2004

EDUCATION

Year	Degree/Exam	Institute
2028	M.TECH Dual Degree 5Y (8.41)	IIT Kharagpur
2022	Higher Secondary (87.4%)	WBCHSE
2020	Madhyamik (91.1%)	WBBSE

PROJECTS

- Optimizing Delivery ETAs with Graph-Based Network Intelligence | Summer Project | IIT Guwahati | Apr'26 - Jun'26** [github](#)
- Engineered a transportation graph with 1,657 nodes and 2,783 edges using 144K+ delivery trip records
 - Developed **Graph-Enhanced XGBoost** models, improving R^2 from **0.15 to 0.40** and reducing **MAE from 16.26 to 14.53 min**
 - Deployed an end-to-end Streamlit [application](#) integrating OSRM API, Folium maps, ETA prediction, and delay-risk visualization
- AI-Powered Industrial Knowledge Intelligence Platform | ET AI Hackathon 2026 (Round 2 Qualifier) | Jun'26 - Jul'26** [github](#)
- Architected an Industrial Knowledge Intelligence platform using **Agentic AI + Hybrid GraphRAG** for enterprise document intelligence
 - Developed a **3-agent workflow** and integrated **OCR, knowledge graphs, vector search** and Gemini image captioning
 - Automated multimodal document processing with **PDF/OCR extraction** across **5+ industrial document types**
 - Implemented compliance monitoring and maintenance intelligence workflows for audit assistance and root-cause investigation
 - Dockerized the **FastAPI** backend and deployed on **Hugging Face** and [frontend](#) on **Vercel**
- Custom CNN Chest X-Ray Model for Pneumonia Prediction | MLOps | Online Course Project | Jun'26 - Jul'26** [github](#)
- Architected **RobustXrayNet**, a custom **PyTorch CNN** with GAP and dropout regularization
 - Improved model performance using class balancing and label smoothing, achieving **84% accuracy** and **0.89 F1-score**
 - Built **BentoML** model serving workflows and automated **Docker + AWS S3** deployment pipelines
 - Deployed the **FastAPI** backend on **Render** and [frontend](#) on **Vercel**
- Optimizing Revenue Leakage and Profitability in Hospitality Sector | Summer Project - IIT Guwahati | May'25 - Jun'25** [github](#)
- Analyzed **32K+ hotel booking records** using Python to identify key drivers of revenue leakage
 - Performed **EDA**, KPI evaluation, and designed **Power BI dashboards** for ADR, RevPAR, Occupancy, and Realization
 - Simulated pricing strategies that **reduced revenue leakage by 49%** and improved profitability

COURSEWORK INFORMATION

Probability and Statistics | Statistical Learning | Reinforcement Learning | Programming and Data Structure(C/C++) | Forecasting | Simulation | Operations Research | Supply Chain Management | Linear Algebra | Cryptography and Network Security

SKILLS AND EXPERTISE

Programming: Python (OOPs) | C++ (OOPs, DSA) | SQL
Machine Learning: Regression | Scikit-learn | Ensemble Learning | XGBoost | Feature Engineering | Model Evaluation
Deep Learning: CNN | Transfer Learning | PyTorch | TensorFlow | YOLO
Generative AI: RAG | LangChain | Ollama | Prompt Engineering
Data Analytics: Pandas | NumPy | EDA | Power BI | Excel | Matplotlib
Deployment: FastAPI | Vercel | Streamlit | Docker | AWS S3, ECR | Hugging Face | Git

TRAINING

PW Skills – Data Science & Generative AI

- Python, ML, DL, EDA, NLP, RAG, FastAPI, Docker, AWS fundamentals, SQL, MongoDB

COMPETITION/CONFERENCE

- 500+ DSA** problems on LeetCode | **LeetCode** Contest Rating **1840** (Top 6.8%) | **CodeForce** - **1200+** contest rating
- ET AI Hackathon 2026 Round 2 Qualifier** – Built & submitted *AI-powered Industrial Knowledge Intelligence Platform* prototype

CERTIFICATIONS

- Machine Learning - AlmaBetter** - Supervised & Unsupervised Learning using Python and scikit-learn | **Decode C++ with DSA (PW Skills)**

POSITIONS OF RESPONSIBILITY

Kshitij Campus Affiliate - IIT KGP Tech Fest | 2023-24

- Led outreach across WB, Bihar & Jharkhand for Kshitij 2024 (60k+ footfall)

WORK EXPERIENCES

Student Mentor | Physics Wallah | Apr'24 - July'24

Mentored 350+ JEE aspirants in Physics and problem solving.

AWARDS AND ACHIEVEMENTS

AIR **5435** – JEE Advanced'2023 among 1,90,000 candidates

AIR **20819** – JEE Main'2023 among 13,00,000 candidate