

# Gourav Desetty

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## EDUCATION

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**Institute of Technical Education and Research (ITER)**

Bhubaneswar, Odisha

*Bachelor of Technology in Computer Science; CGPA: 8.26/10.0*

*Aug 2023 – May 2027*

- **Relevant Coursework:** Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Operating Systems, Machine Learning, Computer Networks

## TECHNICAL SKILLS

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- **Languages:** Python, Java, C/C++, SQL, JavaScript, HTML/CSS
- **AI/ML/DL:** PyTorch, Transformers, TensorFlow, Keras, Scikit-learn
- **Frameworks & Libraries:** FastAPI, Flask, LangChain, LangGraph, OpenCV, Pandas, BeautifulSoup
- **DevOps & Tools:** Docker, Git, MLflow, Prometheus, Grafana, Streamlit
- **Databases & Vector Stores:** PostgreSQL, MySQL, Pinecone, FAISS, Qdrant, ChromaDB

## PROJECTS

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**Acute Lymphoblastic Leukemia CNN Pipeline** | *PyTorch, DenseNet, LangChain*

[GitHub](#)

- Built end-to-end medical diagnostic system classifying 10,661 blood smear images with **92.5% accuracy** and **0.978 ROC-AUC** using fine-tuned DenseNet-121 architecture.
- Addressed 7:3 class imbalance through weighted loss functions and adaptive learning rate scheduling to optimize recall for critical positive cases.
- Integrated LangChain-based NLP module to auto-generate clinical diagnostic reports from model predictions, converting raw inference outputs into readable medical interpretations.

**Model Drift Monitoring System** | *Evidently AI, Prometheus, Grafana*

[GitHub](#)

- Built reusable MLOps observability framework storing model predictions and embeddings in Qdrant vector database with 10K+ inference tracking capability.
- Engineered automated drift detection pipeline using Evidently AI to compute statistical tests (KS-Test) on prediction distributions, exposing drift p-values via FastAPI.
- Integrated Prometheus metrics instrumentation to track model confidence and drift scores in real-time, visualizing shifts on Grafana dashboards with retraining alerts.
- Developed modular Streamlit dashboard with 3 operational modes: live prediction interface, embedded HTML reports, and system health monitoring.

**Network Security MLOps Pipeline** | *MongoDB, MLflow, Docker*

[GitHub](#)

- Architected modular MLOps pipeline for 10K+ sample phishing dataset with decoupled components: data ingestion, validation, transformation, and training.
- Implemented automated data validation using Scipy KS-Test to detect schema drift and distribution shifts between training and inference batches.
- Tracked experiments via MLflow and DagsHub logging F1-scores across Random Forest, Gradient Boosting, and AdaBoost, achieving **best F1: 0.94**.
- Built transformation pipeline with KNN imputation for missing values and containerized entire workflow using Docker for reproducible deployments.

## CERTIFICATIONS

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**Complete Data Science, ML, DL, NLP Bootcamp** – Udemy (99 hours)

Sept 2025

**Mastering Retrieval-Augmented Generation (RAG)** – Neo4j

Oct 2025

**Machine Learning Onramp** – MathWorks

July 2025