

Soumen Mishra

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Portfolio

Hackerrank: mishrasoumen234

LeetCode: Soumen Mishra

Summary

M.Tech candidate specializing in **Artificial Intelligence, Data Science, and Full Stack Development** with hands-on experience building end-to-end intelligent systems using **Python, React, Flask, and TensorFlow**. Skilled in data analysis, model deployment, and REST API integration. Passionate about applying **Generative AI and Machine Learning** to develop scalable real-world solutions. Portfolio: soumnemishra.github.io/My_portfolio_.

Education

M.Tech in Artificial Intelligence and Data Science

2024 – Present

Amrita Vishwa Vidyapeetham, Faridabad, India

CGPA: 7.29

B.Tech (Hons.) in Computer Science and Engineering

2020 – 2024

XIM University, Bhubaneswar, India

Technical Skills

Programming: Python, JavaScript (ES6+), SQL, HTML5, CSS3

Frameworks & Libraries: React.js, Node.js, Express.js, Flask, TensorFlow, Keras, PyTorch, Scikit-learn

Databases & Tools: MySQL, MongoDB, Firebase, AWS, Docker, Git, Power BI

Core Areas: Machine Learning, Deep Learning, NLP, Computer Vision, REST APIs, CI/CD, MLOps

Experience

AI and ML Intern

July 2025 – Sept 2025

Appinventiv, Noida (Hybrid)

Python, TensorFlow, Keras, Scikit-learn, Flask

- Engineered a **Facial Emotion Recognition system** integrating **ResNet50V2** and a music recommendation API, improving inference speed by **20%**.
- Achieved **63.34% test accuracy** on the FER2013 dataset through model fine-tuning, data augmentation, and transfer learning.
- Deployed the model as a **Flask REST API**, contributing to an AI-based emotion-aware recommendation module.

Projects

Breast Ultrasound Image Classification | Python, TensorFlow, Keras

Feb 2025 – April 2025

- Architected a **deep learning pipeline** to classify breast ultrasound images as benign, malignant, or normal using a dataset of **780 images**.
- Employed **transfer learning** with the **InceptionV3** model, which achieved the highest test accuracy of **73.48%**, outperforming VGG16 and ResNet50.
- Addressed class imbalance and improved model generalization through **data augmentation** and **class weighting**, achieving a crucial **sensitivity of 61.29%** for malignant cases.

Orissa Book Store MVP | FastAPI, MongoDB, React, JWT Auth

Present-Nov 2025

- Built a professional online bookstore using **FastAPI (backend)**, **MongoDB (database)**, and **React.js (frontend)** with modular architecture.
- Implemented **JWT-based authentication** for secure signup/login and protected API endpoints.
- Developed features including **home page with search and filters**, **shopping cart**, **checkout**, and **order history**.
- Designed a warm, minimal UI and integrated dynamic order management with quantity tracking and price calculation.

Certifications

- Introduction to Machine Learning on AWS – Coursera (2024):** View the Credentials [Link](#).