Gopal Maurya

Education

National Institute of Technology, Rourkela

Bachelor of Technology in Biomedical Engineering (CGPA - 8.03)

Nov 2022 - May 2026

Rourkela, Odisha

Parvati KIC, Sonaura S.K.N

UP Board, Science (PCM) (Percentage - 85.6%)

Apr 2020 - Jul 2021

 $Sonaura,\ Uttar\ Pradesh$

Parvati KIC, Sonaura S.K.N

UP Board (Percentage - 94.83%)

Apr 2018 – Jul 2019

Sonaura, Uttar Pradesh

Relevant Coursework (Certificates)

• Machine Learning

- Probability & Statistics
- SQL for Business Insights

• Deep Learning

- Data Visualization
- Natural Language Processing

Experience

Research Intern

Glowvista Instruments, NIT Rourkela

May 2025 – Jun 2025

Report | Certificate

- Developed a dual-branch CNN using EfficientNetB3 and ResNet50V2 with channel, spatial, and non-local attention for diabetic retinopathy classification.
- Achieved 87.84% (APTOS 2019) and 83.4% (DDR) accuracy on 5-class severity prediction; reduced manual preprocessing by 60%.
- Automated image enhancement pipeline including cropping, resizing, and contrast normalization.

Projects

YouTube Comment Sentiment Analyzer – Chrome Extension

May 2025 - Jul 2025

 $Python,\ LightGBM,\ Flask,\ MLflow,\ AWS\ EC2/S3,\ DVC,\ Docker$

Prototype | GitHub

- Built a production-ready **Chrome extension** to classify YouTube comments in real time using a **Flask API** and **LightGBM model** (94% train, 87% test accuracy).
- Deployed an end-to-end ML pipeline with MLflow, Docker, and AWS EC2/S3; implemented CI/CD via GitHub Actions for automated testing and deployment.
- Used **DVC**, **Cookiecutter**, and **TF-IDF** to manage versioned data, modular codebase, and scalable preprocessing for sentiment analysis.

AI-Powered Real Estate Insights Platform

Jun 2025 – Jul 2025

Python, Pandas, NumPy, Scikit-learn, Flask, Docker, Cosine Similarity

 $Live\ Site \mid\ GitHub$

- Trained a Random Forest Regressor on Gurgaon housing data with advanced feature engineering (One-hot, Ordinal encoding), achieving $R^2 = 0.90$, MAE = 0.43.
- Integrated a Cosine Similarity-based recommendation engine to suggest similar properties based on user input and features.
- Built and deployed a modular Flask web app with analytics (plots, word clouds) using Docker on Render.

Technical Skills

- Languages: Python, C++, MATLAB, HTML/CSS, SQL
- Data Science Libraries: NumPy, Pandas, Scikit-learn, TensorFlow, Keras, Matplotlib, Seaborn, MLflow
- Tools & Platforms: MySQL, Power BI, MS Excel, Kaggle, Jupyter
- Web & Deployment: Flask, Docker, Render, AWS, Git, GitHub, DVC

Extracurricular Activities

- NCC, Corporal: Completed C-Certificate with distinction; managed logistics for 3+ national camps (CATC, EBSB, Firing).
- Rotaract Club, Design & Outreach Team: Led outreach for 5+ social campaigns, positively impacting 500+ individuals.