

Om Pathak

Bachelor of Engineering (2021-25)
Artificial intelligence and Machine learning
BNM Institute of Technology, Bengaluru

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EDUCATION

BNM Institute of Technology

2021-2025

Artificial intelligence and Machine learning

CGPA: 8.56

Notable Courseworks: Object-Oriented Programming, Machine Learning, Data Structures and Algorithms, Operating System, AI, Cloud Computing, Database and Management System, Computer Networks

PROJECTS

Breathalyzer - Using respiratory metrics

2024

- Developed a ML model for respiratory metrics using **Machine Learning algorithm, Python and StreamLit** and Implemented **Random Forest algorithm** to classify **1.1M respiratory data** records with **95% accuracy**.
- Ensured **data reliability** and consistency for **780K** and **308K** records through advanced **preprocessing** techniques. and **Enhanced** data processing efficiency by **30%**, and reduced runtime by **40%** using **Pandas** and **NumPy**.

Diabetic Retinopathy Prediction Model (GAN + CNN + GPT-4o)

2025

- Developed a medical image analysis model for detecting **diabetic retinopathy** using GANs, CNNs, and GPT-4 for faster report generation with **97%** accurate prediction results.
- Developed Frontend UI for patient details upload and integrated backend APIs to upload the data on **MongoDB, Cloudinary and AWS S3 bucket** for analysis and prediction.

Movie Recommendation System

2023

- Built a Movie recommendation system using **Python, Streamlit, Moviedataset, APIAchievements** and Merged and processed over **10,000 records** from two datasets, reducing **missing values** by **80%**.
- Key features like **genres, keywords, cast, and crew** are transformed into a **5,000-word feature vector space** using the "bag of words" model and implemented **cosine similarity** on that **5,000-dimensional vector space**,
- The system achieves over **90% accuracy** in recommending similar movies.

Expense Tracker System

2024

- Cloud Based Expense Tracker Web Application using **REACT, Firebase, Fullstack** and Constructed the frontend of the website using **React. Designed UI using HTML, SCSS and JavaScript**
- Integrated **Firebase** as the cloud platform for **real-time data synchronization** and secure storage

INTERNSHIP EXPERIENCE

Data Analyst at S.L.N Engineers

Nov 2024, 3 months

Data Analyst Intern

Bengaluru

- Cleaned and structured IT records using Python and SQL by removing duplicates, standardizing formats, and organizing data into relational databases..
- Optimized relational databases, improving query performance through indexing, joins, and normalization techniques, and automated data integration enabling real-time insights and website synchronization.

TECHNICAL SKILLS

Languages: Java, Python, C, SQL, JavaScript, HTML, CSS

Cloud/Databases: MySQL, AWS(basic), GITHub, PHPmyAdmin

Libraries: Pandas, Numpy, Seaborn, Scikit-learn, OpenCV, Keras, Tensorflow

Developer Tools: Cursor AI, Visual Studio, Jupyter, VS Code, NetBins

Data Visualization: Power-BI, Matplotlib

Knowledge of Frameworks like Angular, REST APIs, React, Node and Express.

CERTIFICATIONS

Udemy Online Certification in AI and Cognitive Science

2025

Infosys Spring Board Certification in Introduction to Data Science

2022

Infosys Spring Board Certification in Exploratory Data Analysis and Basic of Linear algebra

2022

ACHIEVEMENTS(CO-CURRICULAR AND EXTRA-CURRICULAR)

IBM Hackathon Selected as top candidate from over **750 participants** for Exemplary performance.

2024

IIT Kharagpur Hackathon Achieved **pre-finalist** status in a competitive **Data science hackathon**.

2024

Clubs Q-quotient (quizzing club), BNMIT MUN at BNMIT