

Pooja Gadhe

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PROFESSIONAL SUMMARY

Detail-oriented postgraduate in Organic Chemistry with strong analytical and problem-solving skills. Skilled in Python, data analysis, and synthesis with a foundation in Data Science, Machine Learning, and AI. Experienced in teaching and research with hands-on project exposure.

EDUCATION

Minor degree in Data Science, ML and AI Indian Institute of Technology, Mandi (IIT Mandi) and Masai Institute	07/2024 – 09/2025
Master of Science (Organic Chemistry) Swami Ramanand Teerth Marathwada University, Nanded	09/2021 – 06/2023
Bachelor of Science (General) Swami Ramanand Teerth Marathwada University, Nanded	06/2018 – 08/2021

SKILLS

Technical Skills :

Python | Machine Learning | Deep Learning | Reinforcement Learning | Graph Convolutional Neural Networks (GCNN) | Transformers | Artificial Intelligence | Data Analysis | PyTorch | TensorFlow | NumPy | Pandas | Scikit-learn | Streamlit | Matplotlib | Seaborn

Soft Skills

Adaptability | Team Collaboration | Communication | Leadership | Problem Solving | Analytical Thinking

PROJECTS

MRI-to-CT IMAGE TRANSLATION USING DEEP LEARNING | PyTorch | Medical Imaging

Objective: Developed an automated MRI-to-CT translation model to improve radiotherapy planning by eliminating dual-modality imaging.

Approach:

- Designed and evaluated three architectures — *U-Net + PatchGAN*, *Turbo U-Net*, and *U-Net + Local Decoder* — using patient-level data and quantitative metrics (SSIM, PSNR, MAE).
- Optimized data preprocessing and model configuration for better generalization and reconstruction quality.

Tech Stack: PyTorch | U-Net | PatchGAN | Residual Blocks | NumPy | Pandas | Matplotlib | Deep Learning

Key Outcomes:

- Best results with *U-Net + Local Decoder* (SSIM 0.8725, PSNR 25.17 dB, MAE 69 HU).
- Demonstrated potential for MRI-only radiotherapy workflows.
- Contributed to research advancing AI-based medical imaging applications in healthcare diagnostics.

Hackathon Project – PCOS Diagnosis Prediction Dashboard

Objective: Built an ML-powered dashboard for early PCOS detection using medical and demographic data.

Approach:

- Implemented and compared classifiers (*Logistic Regression*, *Random Forest*, *SVM*, *Gradient Boosting*).
- Created a Streamlit interface enabling real-time hyperparameter tuning and performance visualization.

Tech Stack: Python | Streamlit | Scikit-learn | Pandas | NumPy | Matplotlib | Seaborn

Key Outcomes:

- Delivered a scalable, interactive diagnostic dashboard with strong predictive accuracy.
- Presented at a hackathon, recognized for innovation and usability.

PROFESSIONAL EXPERIENCE

Visiting Faculty - Department of chemistry Lal Bahadur Shastri College, Dharmabad	08/2023 – 05/2025
<ul style="list-style-type: none">Delivered lectures and mentored postgraduate students in Organic Chemistry.Designed lab sessions and supported curriculum enhancement for postgraduate coursework.Guided students in academic research and project presentations.	

CERTIFICATES

- Workshop on Data Science and Machine Learning – GeeksforGeeks [🔗](#)
- Participation in Xto10x Hackathon Edition – Masai Institute [🔗](#)