

Pooja Gadhe

 gadhepooja3@gmail.com  9579378805  Nanded, Maharashtra  Poojaagadhe  Pooja Gadhe

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 <i>Indian Institute of Technology, Mandi (IIT Mandi) and Masai Institute</i>	07/2024 – 09/2025
Master of Science (Organic Chemistry) <i>Swami Ramanand Teerth Marathwada University, Nanded</i>	09/2021 – 06/2023
Bachelor of Science (General) <i>Swami Ramanand Teerth Marathwada University, Nanded</i>	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

- 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