

Shreyansh Shakya

AI / ML Research Intern — Deep Learning, Medical Imaging, Audio ML

Banswara, Rajasthan, India

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Education

Bachelor of Technology in Computer Science and Engineering, VIT Bhopal University
Expected Jun 2027

Relevant Coursework: Machine Learning, Deep Learning, Probability & Statistics, DBMS, Data Structures

Research Interests

Deep Learning, Medical Image Segmentation, Speech and Audio Processing, Representation Learning, Applied AI

Technical Skills

Programming: Python

Deep Learning: CNN, BiLSTM, U-Net, EfficientNet, TensorFlow, Keras

Machine Learning: Feature Engineering, Model Evaluation, Hyperparameter Tuning

Data Processing: Pandas, NumPy, MFCC Feature Extraction

Tools: Git, GitHub, Jupyter Notebook, VS Code

Research Projects

Speech Emotion Detection (Published Research) *Mar 2025 – Jul 2025*

Python, TensorFlow, CNN-BiLSTM

- Designed a hybrid **CNN-BiLSTM architecture** to model temporal and spectral features in speech signals.
- Built an audio preprocessing pipeline using MFCCs and trained models on benchmark datasets (RAVDESS, TESS).
- Achieved **72% classification accuracy**; authored a peer-reviewed paper accepted at the **International Conference on Data, Energy and Communication Networks (DECON)**.

3D MRI Brain Tumor Segmentation (Ongoing Research)

Python, TensorFlow, U-Net, EfficientNet

- Developing a deep learning framework for **3D MRI brain tumor segmentation** using U-Net with a pretrained EfficientNet encoder.
- Investigating improved feature extraction for volumetric medical data while optimizing computational efficiency.
- Implementing preprocessing, normalization, and evaluation workflows to improve segmentation robustness.

Experience

AI Research Intern *Apr 2025 – Jul 2025*

Coding Jr — Remote

- Conducted exploratory analysis on user and market data to support AI-driven product decisions.
- Collaborated with cross-functional teams to translate analytical findings into technical research directions.

Certifications

Oracle Certified Data Scientist — NPTEL: Introduction to Machine Learning