

Viraj Barapatre

AIML ENGINEER

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Profile Links : [LinkedIn](#) | [GitHub](#)

SUMMARY

Aspiring Machine Learning Engineer skilled in Python, TensorFlow, Keras, and deep learning algorithms. Driven by a commitment to developing AI-powered solutions, enhancing model efficiency, and deploying scalable applications. Proficient in data preprocessing, feature engineering, model interpretability, and API development. Eager to apply AI and data science expertise to solve real-world challenges and contribute to cutting-edge innovations.

EDUCATION

Bachelor of Technology in Computer Science and Artificial Intelligence

G.H. Rasoni College of Engineering, Nagpur

June 2026

12th

M.K.H. Sancheti School And Junior College, Nagpur

2022

10th

Somalwar Nikalas High School And Junior College, Nagpur

2020

SKILLS

TECHNICAL SKILLS

- Programming: Python, C++, Java
- Machine Learning & AI: TensorFlow, Keras, Scikit-learn, OpenCV
- Data Science: Pandas, NumPy, Data Preprocessing, Feature Engineering
- Software & Web Development: Flask, API Development
- Databases: MySQL, MongoDB
- Version Control & Deployment: Git, Docker, TensorFlow Lite, Model Optimization

PROFFESIONAL SKILLS

- Data-Driven Decision Making
- Precision & Accuracy in Execution
- Strategic Thinking & Solutions
- Outcome-Focused Approach
- Flexible
- Effective Communication (Verbal & Written)
- Collaborative Team Engagement
- Process Optimization & Efficiency
- Strategic Task Management

PROJECTS

1. Skin Cancer Detection System [link](#)

- Engineered a CNN-based model to classify malignant and benign skin lesions with >90% accuracy on 10,000+ dermatology images.
- Used transfer learning (ResNet, VGG16, EfficientNet) and Grad-CAM for 20% better interpretability.
- Applied data augmentation, increasing dataset diversity by 30% and reducing overfitting.
- Deployed via Flask API, enabling real-time classification with response time <1s.
- Optimized inference with TensorFlow Lite, reducing model size by 40% for mobile deployment.
- Tech: TensorFlow, Keras, OpenCV, Flask, Pandas, NumPy

2. Brain Tumor Detection System [link](#)

- Built a CNN model for MRI brain tumor classification, achieving >92% accuracy on 5,000+ MRI scans.
- Applied U-Net segmentation, improving tumor localization accuracy by 25%.
- Designed a Flask-based web app, reducing prediction time to <2 seconds per scan.
- Used early stopping & batch normalization, cutting training time by 35% and improving model convergence.
- Tech: TensorFlow, Keras, OpenCV, Flask, Scikit-learn, Matplotlib

3. Text CAPTCHA Solver [link](#)

- Built an AI-powered OCR model to automate text CAPTCHA recognition, achieving >85% accuracy on 50,000+ CAPTCHA images.
- Built an LSTM-based RNN, reducing CAPTCHA-solving time to <0.5s per input.
- Applied image preprocessing, increasing OCR recognition accuracy by 20%.
- Integrated Tesseract OCR & TensorFlow, automating CAPTCHA-solving workflows by 80% for security testing.
- Tech: TensorFlow, OpenCV, Tesseract OCR, Keras, Python