Aastha Smriti Jha

+91-9106197529 | aastha1152004@gmail.com | LinkedIn | Github | Leetcode

Education

Vellore Institute of Technology — Bhopal, MP
B.Tech in Computer Science and Engineering with spec. in AI / ML - 9.2 CGPA — *October 2022 – July 2026*

Atmiya VidyaPeeth School — Gandhidham, Gujarat
Class XII - 96% — *April 2021 – May 2022*

Atmiya VidyaPeeth School — Gandhidham, Gujarat
Class X - 94% — *April 2019 – May 2020*

Technical Skills

HTML, CSS and JavaScript, C++, Python, SQL, AWS, Machine Learning, NLP

Certificates

- IBM Gen AI Using IBM Watsonx — *April 2025*
- IBM Blockchain fundamentals — April 2025
- IBM Blockchain Developers — April 2025
- Applied Machine Learning in Python (Coursera) — Jan 2024

Projects

Mithila Verse | *Python, Hugging Face Transformers, PyTorch, Gradio, PIL (Pillow)* — *April 2025 - June 2025*

- Developed an interactive Maithili language and Mithila art processing app that supports real-time translation between English and Maithili, handling over 1,000 translation requests during testing.
- Achieved 95% text extraction accuracy from Mithila artwork images using pytesseract OCR.
- Integrated custom sentiment analysis for Maithili text, delivering instant feedback with a response time under 1 second per query through a Gradio-based web interface.

MTCNN Guard | Python, TensorFlow/Keras, OpenCV, NumPy, scikit-learn, MTCNN — *Sep 2024 - December 2024*

- Achieved an average mAP (mean Average Precision) of 56.1% and F1 score of 0.505 on the WIDER Face dataset using MTCNN, ensuring reliable detection across challenging conditions1.
- Optimized image pre-processing (resizing, normalization, augmentation) and diverse training data improved detection speed, with MTCNN processing a full-size image in just 0.2 seconds on a modern GPU (RTX 2060)1.
- Enhanced system robustness by training and fine-tuning on datasets with over 10,000 images featuring varied lighting, orientations, and occlusions, resulting in consistent detection performance.

DeepHeart Analyzer | *Python, OpenCV, ScikitLearn, PyTorch, Tensorflow* — *June 2023 - Sep 2023*

- Developed and evaluated machine learning models for cardiovascular disease detection, achieving 97.8% accuracy with a Random Forest Classifier on ECG image data and 78% accuracy with a Gradient Boosting model on lifestyle parameters.
- Utilized Python, scikit-learn, XGBoost, pandas, and OpenCV for data preprocessing, feature engineering, and model development on both image and tabular datasets.
- Implemented advanced ensemble techniques and rigorous cross-validation to ensure robust and reliable predictive performance for clinical decision support.

Achievements

Leetcode: Rank 572345

Solved **250 questions** on LeetCode, demonstrating strong problem-solving skills.

Completed the **100 Days of Code** challenge, enhancing coding discipline and skills.

Got selected in Graph Programming Camp, conquering 17 graph problems.

Got selected for the 3-day conference and exhibition on Technologyl Leveraging Lifestyle organized by Bharatiya Shikshan Mandal.