Apex Aryan Das

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Education

VIT Bhopal University **Expected 2026**
Bachelor of Technology (B.Tech) in Computer Science & Engineering *Madhya Pradesh*

Mother's Public School **July 2022**
Senior Secondary (Class 12) – CBSE, Percentage: 86.9% *Bhubaneswar, Odisha*

DAV Public School, JA **March 2020**
Secondary Education (Class 10) – CBSE, Percentage: 94.6% *Talcher, Odisha*

Technical Skills

Programming Languages: C++, Java, Python, HTML, CSS, JavaScript
Libraries/Frameworks: TensorFlow, PyTorch, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib, FastAPI
Machine Learning & Data Science: Supervised Learning, Unsupervised Learning, Transfer Learning, CNNs, LSTMs, Autoencoders, Data Preprocessing, Feature Engineering
Tools & Platforms: GitHub, Docker, FastAPI, Ngrok, Postman, AWS
Software Development: Data Structures & Algorithms, Object-Oriented Programming (OOP)
UI/UX Design: Figma, Wireframing, Prototyping

Projects

Failure Forecasting in IoT Using LSTM Autoencoder + LSTM | *Python, TensorFlow* **February 2025**
- Developed a two-stage deep learning pipeline for anomaly detection and failure prediction in IoT sensor data.
- Implemented an LSTM autoencoder for anomaly detection and a separate LSTM network for failure forecasting.
- Achieved 99.69% accuracy in fault prediction using a sliding-window approach and threshold-based anomaly detection.

Plant Disease Detection Using Convolutional Neural Networks (CNN) | *Python, Tensorflow* **December 2024**
- Engineered a CNN-based image classification model to identify plant diseases from images.
- Achieved 99% accuracy using data augmentation, image resizing, and pixel normalization.
- Designed a multi-layered convolutional architecture to extract relevant features for accurate classification.

Ensemble Model for Detection of Sickle Cells in RBC Samples | *Python, TensorFlow* **March 2024**
- Developed an ensemble-based machine learning model to classify sickle cell disease using blood cell image data.
- Combined a neural network with a K-Nearest Neighbors (KNN) classifier to improve detection accuracy and robustness.
- Achieved over 98% accuracy by applying data preprocessing, feature extraction, and hyperparameter tuning techniques.

Crop Fertilizer Recommendation System Using XGBoost | *Python, Scikit-learn* **September 2024**
- Developed an XGBoost model to recommend optimal fertilizer application based on soil and weather data.
- Achieved 99.41% accuracy by implementing Label Encoding, Standard Scaling, and Oversampling techniques.
- Improved model robustness with hyperparameter tuning and feature engineering.

Certifications

AWS Solutions Architect - Associate Certification Program **April 2025**
Ethnus (Codemithra) *Online*

Industrial IoT Markets and Security **November 2024**
University of Colorado Boulder (Coursera) *Online*

Cloud Computing **April 2024**
NPTEL *Online*

The Bits and Bytes of Computer Networking **December 2023**
Google (Coursera) *Online*

Additional Information

- Solved 100+ problems on LeetCode, focusing on Data Structures Algorithms.
- Participated in 2024 InnovateYou Hackathon, Pune.
- Led the social media team of a university club.