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, JavaScript, HTML, CSS, Rust
Machine Learning & Deep Learning: TensorFlow, PyTorch, Scikit-learn, OpenCV, CNNs, LSTMs, RNNs, Autoencoders
Data Science & Analytics: Pandas, NumPy, Matplotlib, Data Preprocessing, Feature Engineering, Time-Series Analysis
Development Tools & Platforms: GitHub, Docker, FastAPI, Ngrok, Postman, AWS, Figma
Core Computer Science: Data Structures & Algorithms, Object-Oriented Programming, Software Development

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.

Full-Stack AI Application for Agricultural Insights | *FastAPI, TensorFlow* **April 2025**
- Developed an integrated system combining crop recommendation, fertilizer recommendation, & plant disease detection.
- Built a robust API using FastAPI to serve these ML models, enabling seamless interaction with a web interface.
- Demonstrated expertise in combining multiple AI models and deploying them via an API for practical applications.

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.

Stock Price Predictor Using LSTM Networks | *Python, TensorFlow* **February 2025**
- Developed a time-series forecasting model using LSTM networks to predict stock prices based on historical market data.
- Implemented Min-Max scaling for data normalization and applied early stopping techniques to prevent overfitting.
- Utilized sequential dependencies in financial data to capture complex patterns and improve prediction accuracy.

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