Apex Aryan Das

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EDUCATION

VIT Bhopal University   **Dec 2026**
Bachelor of Technology in Computer Science and Engineering   *Madhya Pradesh*

Mother's Public School   **Jul 2022**
Senior Secondary CBSE, Percentage: 86.9%   *Bhubaneswar, Odisha*

DAV Public School   **Mar 2020**
Secondary Education CBSE, Percentage: 94.6%   *Talcher, Odisha*

TECHNICAL SKILLS

Programming Languages: C++, Java, Python, JavaScript, HTML, CSS, Rust, SQL
Machine Learning and AI: TensorFlow, PyTorch, Scikit-learn, OpenCV, Deep Learning, Neural Networks, Computer Vision
Data Science and Analytics: Pandas, NumPy, Matplotlib, Seaborn, Data Preprocessing, Time-Series Analysis
Cloud and DevOps: AWS, Docker, CI/CD, RESTful APIs, Microservices, FastAPI, API Development
Development Tools: Git, GitHub, Postman, Linux, Agile Methodology, MERN Stack
Databases: MySQL, Database Design, System Architecture

PROJECTS

FAILURE FORECASTING IN IOT USING LSTM AUTOENCODER + LSTM | *GitHub* | *Python, TensorFlow*   **Feb 2025**
- Engineered sophisticated two-stage deep learning pipeline combining LSTM autoencoders and LSTM networks for predictive maintenance in IoT systems, achieving 99.69% fault prediction accuracy.
- Designed robust data preprocessing pipelines for multivariate time-series data from 32 IoT sensors, optimizing feature extraction techniques to improve model performance by 25%.
- Built scalable TensorFlow models with Keras optimization, reducing false positives by 40% for industrial applications.

FULL-STACK AI APPLICATION FOR AGRICULTURAL INSIGHTS | *GitHub* | *FastAPI, TensorFlow*   **Apr 2025**
- Developed integrated agricultural intelligence platform combining crop recommendation, fertilizer optimization, and plant disease detection using ensemble machine learning models.
- Constructed high-performance REST API using FastAPI serving 6 distinct ML models with comprehensive data validation, supporting concurrent users with 98% disease detection accuracy.
- Implemented scalable microservices architecture with automated serving, reducing API response time by 60%.

HIGH-PERFORMANCE HTTP DOWNLOADER (GATOR) | *GitHub* | *Rust, Tokio, Async Programming*   **Sep 2025**
- Created concurrent HTTP downloader in Rust utilizing async/await patterns and Tokio runtime, achieving 10x faster download speeds compared to single-threaded downloaders.
- Architected intelligent chunked downloading algorithms for files exceeding 10MB with auto load balancing, reducing download time by 75% and optimizing bandwidth utilization.
- Established resumable download functionality with HTTP range requests, ensuring 99.9% success rate.

ENSEMBLE MODEL FOR DETECTION OF SICKLE CELLS IN RBC SAMPLES | *GitHub* | *Python, TensorFlow*   **Mar 2024**
- Delivered hybrid ensemble classification system combining deep neural networks with K-Nearest Neighbors algorithms for automated sickle cell disease detection in blood cell microscopy images.
- Accomplished 98.5% classification accuracy through advanced feature extraction, surpassing individual models by 15%.
- Processed 7,000+ blood cell images using comprehensive preprocessing pipelines, reducing overfitting by 20%.

CERTIFICATIONS

AWS Solutions Architect Associate - Ethnus Codemithra   **Apr 2025**
Full Stack MERN Certification - Ethnus Codemithra   **Apr 2025**
Industrial IoT Markets and Security - University of Colorado Boulder (Coursera)   **Nov 2024**
The Bits and Bytes of Computer Networking - Google (Coursera)   **Dec 2023**

LEADERSHIP AND EXTRACURRICULAR

- Managed social media team of Odia club, increasing engagement rates by 45% through strategic content planning.
- Guided 4-member team in ZS Campus Beats 2025 competition, securing top 100 ranking in India.
- Coordinated team of 3 in InnovateYou Hackathon to develop budget-friendly prosthetic using 3D printing.