Apex Aryan Das

+917008584419 | apexrx@proton.me | linkedin.com/in/apexrx | github.com/apexrx | https://tinyurl.com/paxrx

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*
- Engineered 2-stage deep learning pipeline with LSTM autoencoders for predictive maintenance, achieving 99.69% accuracy.
- Designed preprocessing pipelines for 32 IoT sensors using Python and NumPy, improving model performance by 25%.
- Built scalable TensorFlow models with Keras optimization, reducing false positives by 40% in production.
- Implemented time-series anomaly detection algorithms using PyTorch, decreasing maintenance costs by 35%.

FULL-STACK AI APPLICATION FOR AGRICULTURAL INSIGHTS | *GitHub* | *FastAPI, TensorFlow*
- Developed agricultural intelligence platform with crop recommendation and disease detection using ensemble ML models.
- Constructed REST API using FastAPI serving 6 ML models with data validation, achieving 98% detection accuracy.
- Deployed microservices architecture with automated serving using Docker, reducing API response time by 60%.
- Optimized database queries with MySQL and implemented caching, improving application throughput by 45%.

HIGH-PERFORMANCE HTTP DOWNLOADER (GATOR) | *GitHub* | *Rust, Tokio, Async Programming*
- Created concurrent HTTP downloader in Rust with async/await patterns, achieving 10x faster download speeds.
- Architected chunked downloading algorithms for files over 10MB with load balancing, reducing download time by 75%.
- Established resumable download functionality using HTTP range requests, ensuring 99.9% success rate.
- Integrated multi-threaded connection pooling with Tokio runtime, handling 500+ concurrent downloads efficiently.

ENSEMBLE MODEL FOR DETECTION OF SICKLE CELLS IN RBC SAMPLES | *GitHub* | *Python, TensorFlow*
- Delivered hybrid ensemble system combining deep neural networks with K-NN for sickle cell detection.
- Accomplished 98.5% classification accuracy through feature extraction, surpassing individual models by 15%.
- Processed 7,000+ blood cell images using OpenCV preprocessing pipelines, reducing overfitting by 20%.
- Automated model training pipeline with TensorFlow and Scikit-learn, cutting development time by 50%.

Certifications

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

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.