Aadi Jain

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Education

Vellore Institute of Technology, Bhopal Sept 2022 – Current
B.Tech. in Computer Science Engineering
CGPA: 8.75

AP Public School, Farrukhabad 2022
CBSE Percentage: 88.8%

Little Angels High School, Gwalior 2020
CBSE Percentage: 93.2%

Technical Skills

Programming Languages: Python, C++, C, Java, SQL, JavaScript, HTML, CSS
Machine Learning & AI: Transformer Models, NLP, Computer Vision, CNNs, Deep Learning, Data Preprocessing
Software & Tools: Git (Version Control), Linux, AWS (EC2, S3, Lambda), Cloud Deployment, MATLAB
Database Management: MySQL, Database Optimization, Query Performance Tuning, Computer Vision, Data Analytics

Projects

Dementia Prediction Model (Python, PyTorch)
- Built ensemble model with Random Forest, Gradient Boosting, AdaBoost, and XGBoost, achieving 93% accuracy on 373-patient OASIS dataset, using SMOTE and feature engineering for 5 key predictors (Age, SES, eTIV, nWBV, EDUC).
- Analyzed 10+ biomarkers via stats and visuals, noting nWBV at 0.65–0.70 and ASF at 1.1 in dementia, improving interpretability and clinical value.
- Preprocessed 373 records and evaluated with 93% accuracy, F1, recall, and confusion matrices for reliable OASIS-based dementia prediction.

KrishiAI (TensorFlow, IoT, ReactJs)
- Crafted a Random Forest Classifier with 300 estimators and 10 max depth, attaining 97% accuracy on a 1288-record Kaggle dataset, leveraging log-transformed features (N, P, K, pH, EC, OC) and GridSearchCV for optimized fertility forecasts.
- Devised a rule-based system for 5 soil types (Alluvial, Black, Loamy, Sandy, Red) and K-Means clustering for 4 clusters, securing 90%+ accuracy, augmented by visualizations (violin plots, heatmaps) for 12 soil parameters.
- Engineered KrishiAI's architecture with Arduino sensors (3 types: moisture, TMP36, gas), Flask backend, and React frontend, delivering 95% accurate real-time predictions via RESTful APIs, validated by Tinkercad simulations and secure SQLite storage.

Real-Time Facial Recognition for Attendance (OpenCV, Tkinter, Haar Cascade, LBPH)
- Developed a real-time desktop application for student identification and automated attendance using Python, OpenCV, Tkinter, Haar Cascade, and LBPH, enhancing classroom management efficiency.
- Achieved 75–80% facial recognition accuracy with 400 image samples per student, significantly reducing manual errors in attendance tracking.simulations, reducing latency by 40%.
- Designed a Flask-based dashboard with SQLite backend to automate attendance logging and report generation, reducing administrative workload by 80%.

Experience

Computer Vision Intern – EncurelT Systems Pvt Ltd Feb 2025 – May 2025
- Modernized anomaly detection using YOLOv12, achieving a measured 45% improvement in precision and improving speed of image-based data inspection tasks, increasing throughput by 200 images per minute.
- Implemented an advanced object detection pipeline using YOLOv12, improving anomaly detection precision by 45% and automating inspection tasks for image-based datasets.
- Refactored backend architecture with FastAPI, Redis caching, and modular API endpoints, resulting in a 30% reduction in data response latency during high-load operations.

Achievements & Certifications

Achievements
- **IIT Delhi Tryst**, Jan 2019: Secured 3rd place in Blockchain Android App Competition, outperforming 50+ teams with a solution rated in the top 10 over 3 evaluation rounds.
- **IEEE**, 2023: Ranked in the top 500 in MOVE-A-THON, conceptualizing AI solutions for 10 urban traffic scenarios, evaluated over 3 rounds in 2 days.
- **IGDTUW**, 2023: Enhanced platform usability by 40% as a UI/UX Hackathon finalist, improving experience for 50+ users.

Certificates: Machine Learning & AI – Coursera (2024), Data Analytics – Accenture (2023), Cloud Computing – IIT Kharagpur (2024), Postman API Certification – Postman Academy (2023), Marketing Analytics - NPTEL (2025), AWS Solutions Architect- Associate Certification Program - Ethnus (2025), GenAI - IBM (2025), Operating System - Saylor Academy (2025).