Anidipta Pal

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Summary — Results-driven AI/ML enthusiast skilled in Python, deep learning, and geospatial analysis. Experienced in developing machine learning models for agriculture, banking, and climate, with achievements in hackathons. Proficient in strategic planning, data visualization, and web deployment.

Skills

Languages :	Python, C/C++, Java, R, JavaScript, TypeScript
Web Development :	Streamlit, Django, Flask, HTML/CSS
AIML :	NumPy, Pandas, Matplotlib, Seaborn, Plotly, Scikit-Learn, Skimpy, Rasterio, GLAD, XGBoost, AdaBoost, Random Forest, Gradient Boosting, CatBoost, TensorFlow, Keras, PyTorch, CNN, LSTM
Image Processing :	Q-GIS, GeoPandas, OpenStreetMap (OSM), Folium, OpenCV, YOLO, Pillow
Databases :	MySQL, PostgreSQL, MongoDB, Firebase, NoSQL
Data Visualization :	MS Excel, Looker Studio, Google Analytics, PowerBI, Tableau, Dash
Soft Skills & Tools :	Team Management, Strategic Planning, Communication, Problem-Solving, Responsibility, PowerPoint, Git/GitHub, Selenium, Scrapy

Experience

AI/ML Intern   **Jan 2025 – Mar 2025**
Vizzle, India

- Developed a face-tracking system for fashion accessories using deep learning, enabling precise real-time detection and virtual try-on.
- **Skills**: Gen-AI, Virtual Reality (VR), Computer Vision.

Machine Learning Engineer   **May 2024 – Present**
Omdena, Worldwide

- Led advanced ML projects on climate resilience and food security (*Bangladesh*), optimized time-series models for maize yield (+15% accuracy, *Kenya*), enhanced river water quality forecasting (+20% accuracy, Kenya), and improved LCLU-CO2-vegetation analysis with GEE (Milan, +8% accuracy, +25% engagement).
- **Skills**: Machine Learning, Time-Series Forecasting, Geospatial Analysis, Google Earth Engine (GEE), Satellite Data Processing, Dashboard Development, Climate Analytics.

Data Analyst   **Jun 2024 – Aug 2024**
Evoastra Ventures, Mumbai

- Conducted data analysis and created dashboards for 6 projects (+21.67% efficiency) and contributed to report documentation, presenting insights (+8.75% engagement).
- **Skills**: Looker Studio, Data Analysis, Dashboard Development, Business Intelligence.

Data Science Intern   **Feb 2024 – Apr 2024**
Null Class, Bangalore

- Developed a real-time emotion detection system (+20% accuracy) with OpenCV, TensorFlow, and Keras, integrating data augmentation and a chatbot (+25% user interaction), and contributed to predictive analytics models, enhancing accuracy and performance.
- **Skills**: Machine Learning, Deep Learning, Computer Vision, TensorFlow, OpenCV, AI Chatbots.

Education

Heritage Institute of Technology, Kolkata   West Bengal, India
Bachelor of Technology in Computer Science and Engineering (AIML)   *YGPA (1st Year): 9.0*

Projects

CryptoSentinel(Software)   **Mar 2025**
Move AI Hackathon'25   GitHub

- Developed an AI-driven trading assistant that extracts signals from Telegram and executes trades on Aptos.
- Implemented NLP-based market analysis, self-custodial trading, and real-time portfolio tracking.

QuantumTrade-X (Software)   **Mar 2025**
Eolas x Algo: Agent Skills Hackathon   Link

- Developed an AI-powered crypto trading assistant with real-time market analysis and trading signals.
- Integrated Binance & CoinGecko APIs to fetch live data and automate grid trading strategies.

AgroConnect – A Smart Agricultural Marketplace (Software)   **Feb 2025 – Mar 2025**
IEM Hack'25   GitHub

- Built a digital platform for farmers with real-time chat, AI-powered pricing insights, and secure transactions.
- Integrated Razorpay API for payments, Google Translate for multilingual support, and a Streamlit analytics dashboard.

Gearbox Fault Diagnosis (Software)   **Jan 2025**
Hack-O-Sync'25   GitHub

- Developed a CNN-based system to classify sensor readings and detect broken gear teeth under various load conditions.
- Evaluated optimizers (Adam, SMORMS3, RMSProp) and analyzed training performance with detailed metrics.

Test Scheduling and Management System (Software)   **Dec 2024**
Innovathon'25   GitHub

- Created EDVITA, a fully digital education management system eliminating paper-based processes.
- Integrated a secure online compiler and AI-driven test monitoring with face detection.

Pragati Aid (Software)   **Sep 2024**
Hack Synthesis   GitHub

- Developed a machine learning and Web3-based disaster forecasting system, increasing prediction accuracy by 8.7%.
- Integrated GeoTIFF-based visualizations and district-level forecasting, enhancing real-time disaster preparedness by 21%.

Drone-Based Intelligent System for Apple Orchard Management (Hardware)   **Aug 2024 – Sep 2024**
Hack Heritage'24   GitHub

- Designed an AI-powered orchard management system using YOLO for apple counting and disease detection.
- Built a Multimodal Decision-Level Fusion pipeline and an interactive dashboard for real-time monitoring.

Patient Management System (Software)   **Aug 2024**
Status Code 1'24   GitHub

- Developed MediTrack, a patient-doctor management platform for efficient appointment scheduling.
- Integrated real-time chat using Socket.io and WhatsApp notifications for seamless communication.

People Talking on Phone in Danger Zones (Software)   **Mar 2024 – Apr 2024**

Hack Fusion   GitHub

- Developed a YOLO-ResNet50-based system to detect mobile phone usage in restricted zones with 93% accuracy.
- Designed advanced bounding box algorithms and hardware simulations, improving model precision to 98.79%.

Fraud Detection System (Software)   **Nov 2023**

Prasunethon Hackathon   GitHub

- Built a fraud detection model with 95% accuracy, leveraging feature engineering and model quantization.
- Optimized system performance and implemented evaluation techniques to enhance fraud detection efficiency.

Cloudburst Prediction System (Software)   **Sep 2023 – Oct 2023**

Hack Heritage'23   GitHub

- Developed a real-time CNN-LSTM model for cloudburst predictions using GIS and meteorological data.
- Achieved 97-98% accuracy, improving early warning systems for extreme weather events.

Achievements & Certificates

- **1st Place** in VizSpark, EGS Pillay Engineering College.
- **2nd Place** at the Video Frame Sorting Hackathon, Machine Hack, Bangalore.
- **2nd Runner-up** at Hack Synthesis'24, UEM, Kolkata (Top 20 Finalists).
- **2nd Runner-up** at Campus Connect, IIM Rohtak (out of 250 teams).
- **3rd Runner-up** at Hack Fusion, NIT Jamshedpur (out of 300 teams).
- **3rd Runner-up** at Hack Heritage, HIT Kolkata.
- **4th Place** at INNOVATHON'24, NSHM, Kolkata.
- **4th Runner-up** at Contract Risk Management Hackathon, IIT Madras (out of 250 teams).
- **Top 10 Finalist** for Tech Intellina, IET YPS at JU, Kolkata (out of 240 teams).
- **Top 20 Finalist** at TMSL Educ-A-Thon'24 Hackathon.
- **Top 50 Finalist** in the SIF Space Hackathon, ISRO, Faridabad.
- **Bounty Winner** at Eolas x Algo: Agent Skills Hackathon.