

Vansh Sachdeva

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Summary

Results-driven Software Engineer (AI/ML) with 3 years of experience, possessing deep expertise in supervised, unsupervised, and semi-supervised learning algorithms for numerical and structured data. Highly adaptable technical professional with a proven track record of seamlessly executing complex computer vision and Edge-AI video analytics projects. Experienced in architecting scalable backend systems, machine learning analytics, and leading end-to-end project lifecycles from algorithmic design to production deployment.

Skills Summary

- **Programming Languages:** Python 3.12, C++, JavaScript, SQL, Bash.
- **Frameworks and Tools:** OpenCV, Ultralytics (YOLOv8), Keras, TensorFlow, Scikit-learn, Pandas, FastAPI, ReactJS, NodeJS.
- **Databases:** PostgreSQL, MySQL, MongoDB.
- **Other Skills:** Edge Device Integration (NXP i.MX 8M Plus), Time Series Forecasting, REST APIs, Object-Oriented Programming, Data Cleaning, Feature Engineering.

Professional Experience

Mantra Softech (India) Pvt Ltd

May 2025 - Present

Software Developer AI/ML - Solution Innovations And Design Department

Noida, India

- Architected and deployed the IPAS-ANPR access control system from algorithmic design to production, enabling real-time number plate recognition.
- Engineered the backend architecture for a comprehensive Network Video Recorder (NVR) web application deployed on an i.MX 8M Plus edge device using a Yocto image project, developing scalable REST APIs and integrating AI analytics.
- Developed YOLOv8 pipelines and utilized PyTorch and FastAPI to enhance video processing speeds by 25%, resulting in a 15% increase in user satisfaction.

Independent Developer / AI Consultant

June 2023 - March 2025

Freelance ML & MERN Stack Developer

Remote

- Formulated solutions and completed a comprehensive MSME use case deck for AIKosh, focusing on practical AI deployments for small and medium enterprises.
- Architected full-stack e-commerce platforms tailored for European clients using MongoDB, Express.js, React.js, and Node.js.
- Engineered and integrated ML-driven analytics pipelines to extract actionable business insights from user data and product catalogs.

Projects

- **Electrical Energy Consumption Forecasting:** Built a time series forecasting model to predict electricity usage with 92%+ accuracy using TBATS, ARIMA, and SARIMA. Processed 150,000+ records and deployed a Streamlit-based web app. **Technologies:** Python, Pandas, Statsmodels, Streamlit.
- **Algorithmic Trading System:** Defined and refined Python-based trading algorithms for NSE/BSE stocks. Implemented technical indicators (SMA50, SMA200, RSI) to execute a two-month swing trading strategy, prioritizing sustained stock appreciation over short-term gains. **Technologies:** Python, Pandas.

Publications

- **Research Publication:** "Statistical Analysis of Machine Learning Algorithms for Credit Card Fraud Detection," published at RAMSA Conference 2022. Evaluated models on structured data and identified Random Forest as the optimal algorithm over SVMs.

Education

Center For Development Of Advanced Computing

August 2024 - February 2025

Post Graduate Diploma: Big Data Analytics

New Delhi, India

Percentage: 82.5%

Courses: Linux Programming, Cloud Computing, Advanced Analytics, Data Collection and DBMS, Big Data Technologies, Data Visualization, Machine Learning.

Jaypee Institute Of Information Technology

July 2019 - June 2023

Bachelor of Technology - Computer Science And Engineering

Noida, India

GPA: 7.5

Courses: Operating Systems, Data Structures, Algorithms, Artificial Intelligence, Machine Learning, NLP, Big Data Networking, Databases, Web Technologies, Cyber Security, Cryptography.

Certifications and Training

Google Cloud Program

October 2021 - November 2021

Completed Data Science & ML Track

Noida, India