

# RAJWANT RAMASUBRAMANIAN SARMA

## AI Architect | Machine Learning Engineer

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Portfolio: <https://roxstar21.github.io/> | GitHub: [github.com/Roxstar21](https://github.com/Roxstar21)

## PROFESSIONAL SUMMARY

AI Architect and Machine Learning Engineer specializing in scalable, production-grade systems. Experienced in deploying deep learning solutions across finance, computer vision, and predictive analytics. Strong foundation in algorithmic modeling, distributed ML systems, and quantitative research.

## TECHNICAL SKILLS

- Deep Learning: TensorFlow, Keras, PyTorch, CNNs, LSTMs, Transformers, BERT, FinBERT
- Programming: Python (Advanced), C++, SQL, JavaScript
- Data Science: Pandas, NumPy, Scikit-learn, Plotly, Matplotlib, yfinance
- ML Engineering: Model Optimization, Feature Engineering, Hyperparameter Tuning
- Deployment & DevOps: Docker, GitHub, REST APIs, Streamlit, CI/CD
- Core Competencies: Computer Vision, NLP, Time-Series Forecasting, DSA, Quantitative Analysis

## FEATURED PROJECTS

### **Sentinel Pro – Institutional Financial NLP Platform**

- Engineered FinBERT-based sentiment analysis system processing 100K+ financial documents
- Optimized inference pipeline achieving sub-50ms latency
- Built Bloomberg-style terminal for large-scale market data analysis
- Tech: PyTorch, Hugging Face, Streamlit, Python

### **QuantumTrend – Predictive Quantitative Finance Engine**

- Developed LSTM-based forecasting models for equity price prediction
- Integrated Yahoo Finance APIs with RSI, SMA, MACD indicators
- Designed institutional-grade visualization dashboards
- Tech: TensorFlow, Keras, Plotly, Pandas

### **Apex Vision – Autonomous Neural Node**

- Built high-accuracy CNN classifier for 43-class traffic sign recognition
- Implemented tf\_keras compatibility for legacy model deployment
- Simulated Level-3 autonomous perception subsystem
- Tech: TensorFlow, OpenCV, PIL

## HACKATHON & RESEARCH EXPERIENCE

### **Smart India Hackathon – Team Lead & AI Engineer**

- Developed AI & IoT-based rockfall prediction system for mining safety
- Integrated sensor data and CV models for real-time alerts
- Led cross-functional development and deployment

## EDUCATION

B.Tech in Electronics & Computer Engineering | VIT Chennai (2023–2027)

Relevant Coursework: AI, Neural Networks, Embedded Systems, OS, Cryptography, VLSI, DBMS

## **CERTIFICATIONS & ACHIEVEMENTS**

- Deployed full-stack AI portfolio hosting live ML applications
- Active open-source contributor in Financial AI and CV domains
- Microsoft Technology Consultant Intern Applicant (2025)