

HARSHIT JAIN

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SKILLS

- **Expertise:** Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Statistical Analysis, Data Analytics, API Integration
- **Languages:** Python, SQL (Joins, CTEs, Window Functions), JavaScript, C++ , MySQL, HTML/CSS
- **Frameworks:** OpenCV, Streamlit, TensorFlow, Keras, Scikit-learn, Pandas, NumPy
- **Tools:** Power BI, Tableau, Excel (Pivot Tables, Power Query), Git, GitHub, VS Code, Jupyter, Google Colab

EXPERIENCE

Bluestock Fintech

Nov 2024 – Dec 2024

Software Development Engineer Intern

Remote, Pune

- Optimized PostgreSQL queries and backend data pipelines, improving data retrieval speed for analytics dashboards by 20% and enabling faster insights across a 500K+ user base.
- Developed scalable REST APIs that served cleaned and structured data for internal reporting and ML experimentation, ensuring low-latency access for downstream data analysis workflows.
- Collaborated with product and analytics teams to analyze usage patterns, automate log processing, and generate performance insights that improved feature performance and reduced load time by 15%.

PROJECTS

Stock Market Performance Dashboard & Sector Analysis

Python, Pandas, NumPy, Streamlit, Plotly, yfinance

- Engineered end-to-end data pipeline extracting and processing 10 years of NSE stock data (500K+ records) for 11 sectors using yfinance API, implementing data cleaning, normalization, and feature engineering for returns, volatility, and correlation analysis.
- Built comprehensive analytics dashboard using Python (Streamlit, Plotly) featuring 15+ interactive visualizations for sector performance, risk metrics, and cross-correlations, processing data for 50+ stocks with less than 2-second load time.
- Calculated advanced financial metrics including annualized Sharpe ratios, rolling 30/60/90-day volatilities, sector beta values, and maximum drawdown percentages, identifying that IT sector delivered highest risk-adjusted returns (Sharpe: 1.45) over a 5-year period.
- Analyzed sector correlations, finding Banking–Realty strongly linked (0.81) and IT–Energy inverse (−0.23), enabling more effective diversification decisions.

Pneumonia Detection from Chest X-rays using Deep Learning

Python, TensorFlow, Keras, OpenCV, CNN, Transfer Learning, Streamlit

- Developed a CNN-based pneumonia detection system analyzing 5,856 chest X-ray images using InceptionV3 transfer learning and a custom deep CNN architecture, achieving 89.53% accuracy, 88.37% precision, and 95.48% recall on 320 test images.
- Implemented data augmentation pipeline and trained custom deep CNN for 30 epochs on 5,216 training images with batch size 64, addressing class imbalance and achieving validation accuracy of 92% while maintaining low loss (0.41) through the Adam optimizer.
- Built an interactive Streamlit web app for chest X-ray upload and pneumonia classification with confidence scores, comparing InceptionV3 transfer learning against a custom CNN through a detailed metrics dashboard and confusion matrix visualization.

EDUCATION

Vellore Institute of Technology (VIT)

B.Tech in Computer Science with AI & ML

Sept 2022 - May 2026

CGPA: 7.9*

CERTIFICATIONS & ACHIEVEMENTS

- NPTEL: Privacy and Security in Online Social Media
- Coursera: Applied Machine Learning in Python
- FacePrep: MongoDB Associate Database Administrator
- VIT: Python Essentials
- VIT: Computer Vision
- Achievements: Karnataka Police Datathon – Semi-Finalist:
Designed an ML-driven **traffic congestion and encroachment detection model** using YOLO and OpenCV.
- Extra-Curricular: Drove club growth and expanded its professional network as a PR & Outreach Member for the FinTech Club.