Kumar Ritik

Patna, Bihar | k.ritik8048@gmail.com | +91 7903741636 | LinkedIn | GitHub

Summary

Data Science and Machine Learning engineer skilled in Python, Computer Vision, and Deep Learning, with expertise in neural networks and model deployment. Experienced in building AI-driven solutions using CNNs and LSTMs for Alzheimer's detection, stock forecasting, and risk analysis, achieving around 95% accuracy. Proficient in data preprocessing, feature engineering, and visualization with TensorFlow, Scikit-Learn, and Matplotlib. Eager to drive innovative engineering solutions through advanced data pipelines and scalable AI models.

Education

Vellore Institute of Technology, Bhopal, B.Tech CSE, CGPA: 8.2/10 — Sept 2022 – Ongoing

Ishan International Public School, Patna, XII, 74.6% — May 2021

Ishan International Public School, Patna, X, 92.0% — May 2019

Experience

Data Science Intern, Sabudh Foundation — Jan 2025 – Present

- Developed an AI-driven video analysis tool using Computer Vision and YOLO, reducing ad detection time by 30%
- Implemented deep learning models to identify brand logos, improving accuracy by 15% over baseline
- Built data pipelines with OpenCV and Python, enhancing workflow efficiency by 25%

Publications

Alzheimer's Disease Detection Using Convolutional Neural Networks — In Progress

Submitted to Springer, In Progress

Projects

Alzheimer's Disease Detection System — Aug 2023 – Nov 2023

- Built a CNN-based machine learning model to detect Alzheimer's from MRI scans, achieving 92% accuracy
- Optimized data preprocessing (grayscale, noise reduction), cutting training time by 20
- Tech Stack: Python, TensorFlow, NumPy, Pandas, Jupyter Notebook

Stock Price Prediction — Nov 2024 – Jan 2025

- Developed an LSTM-based machine learning model for stock price forecasting, achieving 95.62% accuracy
- Optimized hyperparameters via Grid Search, boosting precision by 10
- Built visualizations with Matplotlib, improving stakeholder usability by 20%
- Tech Stack: Python, TensorFlow, Scikit-Learn, Yahoo Finance API, Matplotlib

Credit Risk Analysis — Feb 2025 – Mar 2025

- Built a Random Forest machine learning model for loan default prediction, achieving 95% accuracy
- Applied SMOTE to address class imbalance, raising F1-score to 0.89
- Tech Stack: Python, Scikit-Learn, NumPy, Pandas, Seaborn

Skills Technologies

- **Programming Languages:** Python, C++, SQL
- **Machine Learning Frameworks:** TensorFlow, Scikit-Learn, PyTorch, Keras
- **Computer Vision:** OpenCV, YOLO, Image Preprocessing
- **Data Science Tools:** Pandas, NumPy, Matplotlib, Seaborn, Power BI, Excel, Dataiku
- **Other:** Data Pipelines, Model Deployment, Neural Networks, Data Modeling, Feature Engineering, Jupyter Notebook
- **Problem Solving:** Solved 100+ LeetCode problems (Data Structures, Algorithms)

Certifications

- Coursera: Applied Machine Learning in Python
- iamneo: Data Science using Python
- IBM: Cyber Security Analyst
- Google Cloud: Generative AI, LLMs
- Vityarthi: AI ML Fundamentals, Computer Vision

Additional Information

- **Achievements:** KSP Data-thon 2024 Semi-finalist
- **Extracurricular:** Core Member of Media Team, Health-O-Tech Club