K Naga Deepak

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SUMMARY

Machine Learning Engineer with 5+ months of production startup experience. Proven track record in optimizing CV pipelines to <50ms latency and increasing machine learning model recall by 9%. Expert in Python, TensorFlow, and SQL, with a focus on deploying end-to-end, scalable ML solutions.

EXPERIENCE

Machine Learning Intern — Gigaversity, Hyderabad (Aug 2025 – Present)

- Optimized Real-Time CV Pipelines: Developed Computer Vision solutions using OpenCV and MediaPipe, achieving <50ms latency and 30+ FPS for core product features.
- Boosted Model Performance: Improved classification recall by 9% using Scikit-learn by implementing custom preprocessing and handling class imbalances via SMOTE.
- Scalable Data Engineering: Engineered end-to-end ETL pipelines for 50,000+ structured records, reducing data processing time by 20% via optimized feature engineering.
- Database Optimization: Designed a MySQL schema for high-dimensional data, improving query speed by 35% for nearest-neighbor searches in the CV application.
- End-to-End MLOps: Managed the full ML lifecycle, including Docker containerization and deployment, ensuring seamless integration and high model reliability post-launch.

PROJECTS

IPL Data Analysis and Visualization (2008-2024)
www.kaggle.com/code/deepak48/ipl-2008-2024-deep-data-analysis-insights

- Large-Scale Data Processing: Engineered an end-to-end analytics pipeline for 200,000+ ball-by-ball deliveries and 1,095 matches using Python, Pandas, and NumPy.
- Actionable Insights: Derived 10+ key performance indicators (KPIs) on player efficiency, batting-order optimization, and bowling effectiveness using advanced aggregations and feature engineering.
- Statistical Visualization: Built insightful visual narratives with Matplotlib and Seaborn to uncover 16 years of winning trends and player impact patterns.

Stroke Prediction with Machine Learning | Classification Project
www.kaggle.com/code/deepak48/stroke-prediction-with-machine-learning

- Imbalanced Modeling: Mitigated a 5% class imbalance using SMOTE and cost-sensitive learning, significantly reducing majority-class bias to prioritize high-risk stroke detection.
- Model Optimization: Boosted stroke-risk recall from 77% to 84% by fine-tuning XGBoost and Random Forest models, focusing on minimizing false negatives in clinical scenarios.
- Feature Engineering & Validation: Applied Winsorization, log-transformations, and median imputation to ensure data integrity; validated model robustness via k-fold CV, ROC-AUC, and Precision-Recall curves.

EDUCATION

Bachelor of Technology in Electrical and Electronics Engineering
Vishnu Institute of Technology • Bhimavaram, Andhra Pradesh • 2024 • 8.18

SKILLS

- **Languages:** Python, SQL (MySQL).
- **Machine Learning:** Scikit-learn, XGBoost, Random Forest, Classification, Regression, SMOTE, Hyperparameter Tuning, Model Evaluation.
- **Deep Learning & Computer Vision:** TensorFlow, Keras, OpenCV, MediaPipe, CVZone, CNNs, RNNs, Image Augmentation.
- **Data Analysis & Visualization:** NumPy, Pandas, Feature Engineering, Matplotlib, Seaborn, Power BI.
- **Natural Language Processing:** Text Preprocessing, TF-IDF, Word Embeddings (Word2Vec, GloVe), Bag of Words.
- **MLOps & Deployment:** Docker, FastAPI, Streamlit, Git/GitHub, Render.