HARSHA VARDHAN ANDRA

Machine Learning Engineer

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SUMMARY

Machine Learning Engineer, Data Scientist with 3.5 years of combined experience delivering AI solutions in healthcare, finance, and technology. Skilled in Python, R, SQL, Java, and C++, with hands-on expertise in frameworks like TensorFlow, PyTorch, Keras, and Scikit-learn. Experienced in NLP, computer vision, big data technologies (Spark, Hadoop), and cloud platforms (AWS, Azure, GCP). Built and deployed predictive models for patient outcomes, fraud detection, and risk management using end-to-end ML pipelines. Strong communicator and team mentor, adept at leading cross-functional teams and translating complex data into actionable insights.

SKILLS

- **Methodologies:** SDLC, Agile, Waterfall
- **Programming Languages:** Python, SQL
- **IDEs:** Visual Studio Code, PyCharm, Jupyter Notebook
- **Libraries & Packages:** NumPy, Pandas, Plotly, Matplotlib, Seaborn, SciPy
- **Machine Learning:** Linear & Logistic Regression, Decision Trees, SVM, Random Forests, Naive Bayes, KNN, K-Means, CNN, Supervised & Unsupervised Learning, Classification
- **NLP & Data Engineering:** Spark, Hadoop, Hive, Apache Kafka, MLflow, Docker, Kubernetes, SageMaker, Apache Airflow, Sequence Classification, n-grams, TF-IDF, Behavioural Anomaly Detection
- **ETL Tools:** SSIS, Snowflake
- **Databases:** MySQL, SQL Server
- **Data Visualization:** Tableau, Power BI
- **Cloud Platforms:** AWS, GCP, Azure
- **Version Control:** Git, GitHub
- **Soft Skills:** Presentation, Problem-Solving, Time Management, Leadership, Innovation
- **Operating Systems:** Windows, Linux

EXPERIENCE

Hugging Face, USA | Machine Learning Engineer **Jan 2024 – Current**

- Developed and deployed predictive models using TensorFlow, PyTorch, Keras, and LightGBM, achieving up to 30% improvements in accuracy for patient risk prediction, fraud detection, and clinical outcomes.
- Engineered scalable data pipelines with Apache Spark, Hadoop, and Kafka, reducing data processing time by 40% and enabling real-time analytics on over 20M patient records weekly.
- Applied advanced feature engineering, model tuning, and evaluation techniques (XGBoost, Random Forest, Gradient Boosting), resulting in 25–30% reductions in hospital admissions and ICU cases.
- Led A/B testing and AI model deployment in Databricks and PySpark environments, improving triage systems and reducing ER wait times by 20%.
- Automated CI/CD pipelines and model retraining workflows, boosting model reliability and cutting manual maintenance efforts by 40%.
- Analyzed patient utilization data using clustering (e.g., K-Means) and segmentation, enabling personalized treatment strategies and improving healthcare resource allocation.
- Optimized data processing with Python (NumPy, Pandas), SQL, and MySQL/Cassandra databases, improving pipeline efficiency by 35% and ensuring 99.9% data integrity for downstream analytics.

MiraiCoders Technology, India |Data Scientist **Jun 2020 – Aug 2022**

- Designed, trained, and implemented deep learning and machine learning models using PyTorch, TensorFlow, Scikit-learn, and XGBoost, achieving a 25% boost in forecasting accuracy and accelerating prediction speed by 40% through model optimization.
- Optimized CNN and RNN models using grid and random search, enhancing model performance and reliability in tasks like fraud detection and credit risk assessment.
- Processed and analyzed large-scale financial and operational datasets (10M+ rows) using Python, Pandas, SciPy, and visualization tools like Matplotlib, Seaborn, and Plotly to uncover actionable insights.
- Built scalable data pipelines with Apache Spark and managed cloud-based ML workflows on AWS, Azure, and GCP, achieving 20% cost savings and improved model deployment speed by 30%.
- Designed and optimized SQL queries and managed relational and NoSQL databases (PostgreSQL, MongoDB, MySQL), reducing data retrieval times by up to 35%.
- Created interactive dashboards using Tableau and Power BI, enhancing stakeholder engagement and enabling faster decision-making through visualized KPIs.
- Engineered neural networks for real-time fraud detection and financial forecasting, reducing false positives by 22% and supporting secure, high-volume data access via AWS S3.

EDUCATION

Master of Science (M.S.) in Computer Science **May 2024**

Pace University, New York

Bachelor of Science (B.S.) in Computer Science **Aug 2021**

GMR Institute of Technology, Razam, India

CERTIFICATIONS

- Machine learning with python (Coursera)
- IBM Ai Developer (Coursera)
- Fine Tuning Large Language Models by Deep learning Ai (Coursera)