SAILUSHA VENKITEELA

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PROFESSIONAL SUMMARY

AI/ML Engineer with 3+ years of experience developing and deploying machine learning models for classification, forecasting, and anomaly detection in finance and healthcare. Skilled in Python, TensorFlow, PyTorch, and Scikit-learn with expertise in NLP and deep learning. Experience in building and fine-tuning Large Language Models (LLMs) and applying AI techniques to improve automation, accuracy, and decision-making. Proficient in designing end-to-end ML pipelines and integrating AI solutions on cloud platforms (AWS, GCP).

TECHNICAL SKILLS

Programming Language/IDEs: Python, R Programming, SQL, Jupyter Notebook, Google Colab

Machine Learning: Regression Models, Decision Trees, Random Forests, Naive Bayes, SVM, Hypothesis Testing, XGBoost

GenAI: LLaMA, Mistral, LlamaIndex, LangChain

AI & Deep Learning: CNN, ANN, BERT, GPT-4, Large Language Model (LLM), Retrieval-Augmented Generation (RAG)

Natural Language Processing: Named Entity Recognition (NER), Topic Modeling, Sentiment Analysis, Text Summarization

Cloud: AWS (S3, Lambda, Glue, Athena, AWS Kinesis, Redshift), GCP (Vertex AI, Google Cloud Storage)

Visualizations: Tableau, Power BI (DAX, Power Query), Looker, Excel

Packages and Frameworks: NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, Keras, OpenCV, NLTK, PyTorch

Database: SQL Server, PostgreSQL, MongoDB, Redis, Neo4j

WORK EXPERIENCE

Morgan Stanley **Florida, USA**

AI/ML Engineer September 2024 - Present

- Developed Large Language Models (GPT-4, LLaMA) with LangChain and Retrieval-Augmented Generation (RAG) pipelines, enabling analysts to retrieve market intelligence from unstructured financial documents, and reduced research turnaround time by 40%.
- Engineered Named Entity Recognition (NER) and topic modeling solutions with TensorFlow and NLTK to extract entities such as counterparties, securities, and risk terms from regulatory filings, improving compliance monitoring accuracy by 30%.
- Implemented GAN-based anomaly detection for trade surveillance, identifying suspicious trading activities in real time and reducing false positives by 25% compared to legacy rule-based systems.
- Designed model monitoring dashboards with Vertex AI and Looker, tracking drift, latency, and accuracy across production ML models, which improved risk-model audit readiness and cut issue response times by 35%.
- Optimized PostgreSQL and Redis pipelines for LLM-powered fraud detection models, enabling real-time analysis of transaction data, reducing verification delays by 18%, and cutting annual infrastructure costs by $2.3M through efficient compute and storage use.
- Automated portfolio risk simulations in Python using TensorFlow, providing portfolio managers with scenario-based insights that accelerated decision-making and improved forecast precision by 20%.
- Delivered executive-facing dashboards in Power BI and Looker, translating AI-driven insights into actionable investment and risk strategies used across wealth management and trading desks.

LTIMindtree **Hyderabad, India**

Machine Learning Engineer July 2021 – July 2023

- Built classification models (Decision Trees, Random Forests, Naive Bayes, XGBoost) in Python and Scikit-learn to predict customer churn for a retail client, improving retention targeting and lowering churn by 15%.
- Established sentiment analysis and text summarization pipelines using BERT and PyTorch, enabling faster review of client feedback and reducing manual analysis time by 60%.
- Crafted Convolutional Neural Network (CNN) based image recognition models in Keras and TensorFlow to automate quality checks in manufacturing datasets, achieving 92% accuracy and cutting inspection time by 40%.
- Accomplished hypothesis testing and cohort analysis for an e-commerce project, providing data-driven recommendations that increased cross-sell opportunities by 12%.
- Utilized clustering algorithms (K-Means, DBSCAN) on Indian customer datasets to identify purchasing and usage patterns, enabling region-specific marketing campaigns that improved response rates by 12%.
- Streamlined MongoDB and Neo4j queries to improve graph-based relationship mining, enabling fraud analysts to uncover hidden connections between entities.
- Deployed real-time streaming pipelines using AWS Kinesis and Redshift to capture and process millions of customer transactions per day, improving data ingestion speed and reducing latency by 35%, which strengthened fraud monitoring and risk analysis.
- Created interactive Tableau dashboards that integrated outputs from fraud detection and user behavior models, giving risk teams and business stakeholders actionable insights in real time and accelerating decision-making across multiple business units.

EDUCATION

Florida Institute of Technology **Melbourne, FL**

Master of Science in Computer Science May 2025

Sree Venkateswara College of Engineering **Andhra Pradesh, India**

Bachelor of Technology in Computer Science May 2023