

# LAKSHMI POOJITHA LYSETTI

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## PROFESSIONAL SUMMARY

AI/ML Engineer with 4 years of experience in developing and deploying machine learning, deep learning, and generative AI (GenAI) models. Skilled in Python, TensorFlow, PyTorch, and Scikit-learn for NLP, computer vision, and predictive analytics. Experienced in LLM-based systems using LangChain, LangGraph, and RAG pipelines with vector databases such as Pinecone, FAISS, Weaviate, and Milvus. Proficient in MLOps using Docker, Kubernetes, Azure Machine Learning, CI/CD, and model versioning.

## SKILLS & CERTIFICATIONS

**Programming Languages & IDEs:** Python, R, SQL, Jupyter Notebook, Google Colab  
**Machine Learning & Deep Learning:** Decision Trees, Random Forests, Naive Bayes, K-Means, DBSCAN, Principal Component Analysis (PCA), Recurrent Neural Networks (RNNs), Artificial Neural Networks (ANNs), Convolutional Neural Networks (CNNs), XGBoost  
**Deep Learning Frameworks:** TensorFlow, Keras, PyTorch  
**AI & Generative AI Technologies:** LangChain, LangGraph, LlamaIndex, Retrieval-Augmented Generation (RAG), LLaMA, Claude, GPT-4  
**Natural Language Processing (NLP):** BERT, RoBERTa, Named Entity Recognition (NER), NLTK, SpaCy  
**Vector Databases:** Pinecone, FAISS, Weaviate, Milvus  
**Cloud Platforms:** AWS (SageMaker, Lambda, CloudWatch, CloudFormation), Azure  
**Libraries & Tools:** Scikit-learn, Pandas, NumPy, SciPy, PySpark, Matplotlib, Seaborn  
**Data Visualization & Databases:** Tableau, Power BI, SQL Server, MySQL, PostgreSQL, MongoDB  
**MLOps & Deployment:** Docker, Kubernetes, CI/CD Pipelines, RESTful APIs  
**Certifications:** Databricks Accredited Generative AI Fundamentals | Microsoft Azure Fundamentals

## WORK EXPERIENCE

<b>JPMorgan Chase &amp; Co.</b>	<b>USA</b>
AI/ML Engineer	October 2024 – Present
<ul style="list-style-type: none"><li>Developed and deployed large language model (LLM) pipelines using LangGraph, LlamaIndex, and GPT-4 to automate document intelligence for financial compliance reports, reducing manual review time by 42%.</li><li>Engineered a Retrieval-Augmented Generation (RAG) system integrated with Pinecone and FAISS to retrieve unstructured credit data with &lt;1-second latency, improving analyst decision accuracy by 31%.</li><li>Trained and fine-tuned transformer models (BERT, LLaMA, Claude) for Named Entity Recognition (NER) to extract entities from trade confirmations and contracts with 96% precision.</li><li>Implemented scalable TensorFlow pipelines on AWS SageMaker for customer risk scoring, cutting model training cost by 28% through optimized compute instance selection.</li><li>Automated data ingestion and preprocessing using PySpark and PostgreSQL, enabling near real-time analytics for fraud detection and enhancing pipeline throughput by 2.3x.</li><li>Orchestrated containerized deployments via Docker, AWS Lambda, and CI/CD workflows, ensuring consistent and version-controlled model releases across environments.</li><li>Visualized predictive performance and anomaly trends using Tableau, delivering interactive dashboards adopted by senior credit-risk teams for model monitoring.</li><li>Integrated Generative AI models for conversational query handling within internal analytics tools, improving employee query-response efficiency by 38% and reducing support ticket volume.</li></ul>	
<b>LTIMindtree</b>	<b>India</b>
ML Engineer	August 2020 – July 2023
<ul style="list-style-type: none"><li>Designed and trained supervised models using Decision Trees, Random Forests, Naive Bayes, and XGBoost to predict customer churn and loan default risk, achieving 89% accuracy and reducing manual review time by 35%.</li><li>Developed deep learning architectures with Recurrent Neural Networks (RNNs) and Convolutional Neural Networks (CNNs) in Keras and PyTorch for sentiment and image classification, improving F1-score by 22% over baseline models.</li><li>Implemented unsupervised algorithms such as K-Means, DBSCAN, and Principal Component Analysis (PCA) to segment transaction data and detect anomalies, identifying fraud clusters previously missed by rule-based systems.</li><li>Optimized natural language processing (NLP) workflows using Bidirectional Encoder Representations from Transformers (BERT), Natural Language Toolkit (NLTK), and SpaCy for entity recognition and intent analysis, enhancing text classification precision by 30%.</li><li>Streamlined large-scale ETL and feature engineering pipelines with PySpark and SQL Server, reducing data preparation time by 40% and improving overall model retraining efficiency.</li><li>Performed exploratory data analysis (EDA) and hypothesis testing using Python, NumPy, Pandas, and Excel, uncovering actionable insights that informed business strategy and reduced operational costs by 15%.</li><li>Delivered interactive dashboards via Power BI, integrated with Azure Machine Learning APIs to monitor key metrics and visualize model drift across production environments.</li></ul>	

## EDUCATION

<b>Master of Science, Computer Science</b>   California State University, Fullerton, CA, USA	<b>May 2025</b>
<b>Bachelor of Technology in Computer Science</b>   Dayananda Sagar University, Bangalore, India	<b>May 2022</b>