Sirichandana Bomma

Machine Learning Engineer

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PROFESSIONAL SUMMARY

- **Machine Learning Engineer with 3 years of experience** in developing and deploying AI/ML models, cloud-based architectures, and scalable pipelines.
- **Expertise in Python, TensorFlow, PyTorch, Spark, and cloud platforms (Azure, AWS, GCP).**
- Strong foundation in **deep learning, reinforcement learning, and responsible AI practices** for **NLP, GenAI, and real-time analytics.**
- **Experienced in developing large-scale machine learning pipelines**, automating deployments using **CI/CD**, and ensuring high availability.
- **Built and deployed LLM-based applications**, fine-tuned models, and optimized **GenAI solutions** for real-world business problems.
- Experienced in **Microsoft Copilot Studio development and support,** specializing in **AI-powered automation, prompt engineering, and low-code AI solutions.**
- Hands-on experience in supporting and troubleshooting **Copilot Studio applications, Microsoft 365 services, and Office 365 ecosystem.**
- Strong expertise in **AI-driven customer support automation, LLM-powered chatbots, and AI agents using Copilot Studio, GPT, and Power Automate.**
- Skilled in **Tier-1 & Tier-2 support roles,** assisting enterprise users with **AI chatbot development, deployment, and issue resolution.**
- Passionate about **AI research and development, including applications in GenAI, LLMs, and explainable AI.**

SKILLS

- **Programming Languages:** Python (NumPy, Pandas, scikit-learn, TensorFlow, PyTorch, Keras), Scala, Spark, SQL, C++, PySpark, SQL, PostgreSQL, JAX, MongoDB
- **Software Development:** Software Development Life Cycle (SDLC), Computer Vision, Anomaly Detection, Clustering, Association Models, Microsoft Copilot Studio Development
- **Machine Learning & AI:** Deep Learning, Reinforcement Learning, Transfer Learning, Vertex AI, Generative AI, Text Mining, NLP, Mechanistic and Statistical Modeling, Data Science Project Management, Microservices, API Deployment, ML Data Pipelines, GPT, Copilot Studio, Power Automate, Copilot 365 Agents
- **Data & Cloud Technologies:** Apache Spark, Hadoop, Kafka, Azure AI, AWS, GCP, Databricks, Snowflake, Cloud-based batch model deployments (Azure, AWS, GCP), Prompt Engineering, Agent Architectures, Agile Methodology, Cloud Architecture
- **Data Analysis & Visualization:** Statistical Modeling, Time Series Analysis, A/B Testing, Tableau, Excel, Data Visualization, Power BI, Time Series Analysis, Data Augmentation for Large-Scale Datasets, GPU Clusters
- **DevOps & MLOps:** CI/CD, Docker, Kubernetes, Git, API Development, Model Deployment, Model monitoring, drift detection, online and offline Model Inference Optimization, event-based retraining, LLMOps, RAG frameworks, Airflow, AI Model Monitoring & Versioning (MLOps), Retrieval-Augmented Generation (RAG) & Knowledge Retrieval

- **AI Applications:** Ads Ranking, Recommendation Systems, User Modeling, Fraud Detection, Generative AI Search Engine Development, LLMs (ChatGPT, BERT, GPT, DALL·E, T5), Fine-tuning Generative AI models
- **Frameworks:** Django, OpenCV, IBM Watson
- **Tools:** Microsoft 365 & Office 365 Application Support, SharePoint (Online & On-premise)

EMPLOYMENT HISTORY

Machine Learning Engineer | 7Stones Tech LLC   **July 2024 – Present**
- Developed **GenAI** copilots using **Microsoft Copilot Studio** for automation.
- Built NLP-based spam detection and sentiment analysis models.
- Designed and deployed ML models on **Azure**, improving ad targeting and retrieval.
- Developed scalable targeting systems using **Spark and Hadoop** for behavioral analysis.
- Automated **ML pipelines** and deployment using **CI/CD** and cloud-based solutions.
- Built and deployed **real-time data streaming pipelines using Kafka** for scalable ML model inference.
- Developed and deployed **ML models** in batch mode using cloud services **(Azure/AWS/GCP).**
- Developed and fine-tuned **LLMs using LLMOps** best practices, including monitoring and optimization.
- Deployed and optimized **retrieval-augmented generation (RAG) applications using Pinecone and FAISS.**
- Developed AI-driven solutions for **Anti-Money Laundering (AML)** and **fraud detection in financial transactions.**
- Developed and optimized **ML data pipelines** for model training and deployment in production environments.
- Implemented machine learning techniques to detect suspicious activities and optimize **AML compliance workflows.**
- Developed and deployed **AI-powered chatbots using Microsoft Copilot Studio**, enabling automation for enterprise workflows and customer support.
- Provided **Tier-1 and Tier-2 support for AI-driven applications**, troubleshooting issues related to **Microsoft 365, Office 365, and Copilot Studio deployments**.
- Created **AI Agents using low-code platforms**, integrating **GPT-based chatbots, Copilot Studio, and Power Automate** for business automation.
- Designed **prompt engineering strategies** to enhance chatbot accuracy, reduce biases, and improve AI-generated responses.
- Integrated **ServiceNow for IT Help Desk support**, assisting in **incident management and AI chatbot troubleshooting**.
- Conducted **LLM-based chatbot optimization**, improving user experience, reducing hallucinations, and ensuring secure AI interactions.
- Designed and optimized interactive dashboards using **Tableau and Power BI** for visualizing model insights and performance.
- Implemented **MLOps** practices such as **model monitoring, drift detection, and automated retraining.**

Software Engineer | Zensar Technologies Limited, Hyderabad, India   **Aug 2021 - July 2022**
- Developed and optimized real-time **ETL pipelines** using **Python and AWS**, reducing data processing latency.
- Designed scalable big data architectures with **Hadoop, Spark, and Kafka**, enabling large-scale analytics.
- Implemented **deep learning models** for predicting user engagement and ad effectiveness, increasing ROI.
- Built **machine learning models** for fraud detection and behavioral analysis, improving risk mitigation strategies.
- Automated data ingestion processes using **AWS Data Pipeline**, enhancing data transformation workflows.
- Built and optimized **ML-specific data pipelines** to enhance model performance and scalability.

- Developed **NLP models** for user sentiment analysis, aiding in business intelligence and customer feedback analysis.
- Led performance optimization initiatives, fine-tuning **Spark and SQL queries** for real-time analytics.
- Implemented predictive analytics models leveraging **statistical methods, time series forecasting, and NLP-based techniques** for data-driven decision-making.
- Developed and deployed data visualization dashboards using **Power BI and Tableau** to improve reporting and insights.
- Deployed ML models using **TensorFlow, scikit-learn, and Spark MLlib**, ensuring high availability in production.

Machine Learning Intern, COIGN Technologies, Warangal, India　　　　　　　**Dec 2020 - June 2021**
- Developed **NLP and computer vision** models for insurance claim processing.
- Implemented **Bidirectional LSTMs and CNNs** for text and image recognition.
- Designed fraud detection systems using **Spark MLlib and Azure AI tools**.

Android Developer Intern, COIGN, Hyderabad, India　　　　　　　**June 2020 - Nov 2020**
- Developed the presentation layer using **HTML, CSS, JavaScript, jQuery and AJAX**.
- Developed reusable code libraries, streamlining future development tasks while maintaining consistency across projects.

EDUCATION

University of North Texas　　　　　　　Denton, TX, USA

Master's in Information Science; GPA: 3.7　　　　　　　**August 2022 – May 2024**

Jawaharlal Nehru Technological University　　　　　　　Hyderabad, Telangana, India

Bachelor of Technology in Computer Science & Engineering; GPA: 3.4　　　　　　　**July 2017 – August 2021**

CERTIFICATION LINKS

Salesforce Certified AI Associate

IBM Certified Machine Learning Developer

LearnKartS Certified Kubernetes Application Developer (CKAD)

IBM Certified Enterprise Design thinking Practitioner

IBM certified Enterprise Design Thinking – Team essentials for AI

AI in Healthcare by Stanford University

Data Science with python by SimpliLearn

Large Language Models by SimpliLearn

Generative AI by SimpliLearn

Vanderbilt University Certified Prompt Engineering