Rob Seals

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Professional Summary

ML Engineer with over 5 years of experience in developing and deploying machine learning models and natural language processing (NLP) solutions. Skilled in Python, TensorFlow, PyTorch, and scikit-learn. Expertise in generative AI, model fine-tuning, and cloud-based deployment (AWS, Azure). Adept at applying machine learning algorithms to solve real-world business problems and deliver actionable insights. Collaborative team player experienced in cross-functional teamwork and end-to-end model development.

Work Experience

AI / ML Engineer - Tata Consultancy Services (TCS)

2024-06 - 2024-10

Developed NLP-based AI assistants for generative responses and intent classification, improving customer interactions and reducing handling time. Fine-tuned LLMs (GPT, Llama, Claude) to optimize context-aware dialogues and retrieval-augmented generation (RAG), enhancing system performance. Deployed models using AWS Lambda, ensuring scalability and efficient lifecycle management, including performance monitoring. Optimized MLOps pipelines, enabling automated updates, CI/CD, and continuous model tracking to ensure high-quality outcomes.

NLP / Conversational AI Scientist - Charter Communications (Spectrum)

2023-06 - 2024-06

Fine-tuned 7 domain-specific models for NLU tasks, achieving a 95% F1 score and improving model performance across various industries. Built preprocessing pipelines, semantic search algorithms, and custom prompts for improved intent recognition and conversational experiences. Collaborated with CX teams to optimize IVR systems and real-time conversational AI strategies, enhancing user engagement. Integrated data analysis scripts to monitor model performance and identify opportunities for improvement.

Machine Learning Engineer - Vision R&D

2021-08 - 2023-06

Developed scalable machine learning solutions for business problems, including traditional ML, computer vision, NLP, and reinforcement learning. Designed high-performance retrieval systems with Faiss and Rust, improving model inference and data access efficiency. Contributed to cloud deployment using AWS and Docker, ensuring scalable applications for real-time processing.

Financial Data Analyst - Hudson Way Capital

2020-10 - 2021-06

Developed predictive models (e.g., logistic regression, time series forecasting) to assess company valuations, earnings potential, and market risk. Engineered features from unstructured market data (e.g., financial reports, news feeds) using tokenization and text embeddings to support investment decisions. Applied MLOps practices for model deployment and continuous integration, ensuring scalable solutions aligned with internal data governance.