Pruthvi Reddy Doddi

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AI/ML Engineer with **3+ years** of practical experience delivering end-to-end machine learning solutions in production environments. Developed and deployed models for risk prediction, credit scoring, and customer behavior analysis using Python, PyTorch, Scikit-learn, and XGBoost. Gained strong hands-on expertise in MLOps workflows—experiment tracking with MLflow, automated pipelines with Airflow, and model deployment via Docker, FastAPI, and Kubernetes. Recently contributed to LLM fine-tuning initiatives using Hugging Face Transformers and LangChain. Experienced in working with cloud platforms like AWS SageMaker and GCP Vertex AI, and comfortable translating business problems into working, reliable ML pipelines. Known for improving model retraining cycles, reducing technical debt, and enabling real-time model monitoring with tools like Grafana and TensorBoard.

SKILLS

- **Programming & Scripting**: Python, SQL, PySpark, Bash, Pandas, NumPy
- **ML & Deep Learning**: TensorFlow, PyTorch, Scikit-learn, XGBoost, Keras, ONNX, TorchScript
- **NLP & LLMs**: Hugging Face, spaCy, Transformers (BERT, GPT), OpenAI API, LangChain
- **MLOps & Deployment**: MLflow, Kubeflow, Airflow, Docker, Kubernetes, FastAPI, Jenkins
- **Cloud Platforms**: AWS (SageMaker, S3, Lambda), GCP (Vertex AI, BigQuery), Azure ML
- **Big Data & Streaming**: Apache Spark, Kafka, Snowflake
- **Monitoring & Visualization**: Grafana, TensorBoard, Weights & Biases
- **Model Specialties**: Generative AI, LLM Fine-Tuning, Model Explainability (SHAP, LIME), Model Optimization (Quantization, Pruning)

EXPERIENCE

Liberty Mutual Finance (Feb 2024 – Current**)**
ML Ops Associate

- Audited legacy ML pipelines to identify bottlenecks in data ingestion, model retraining, and deployment.
- Modularized PySpark and Python scripts to separate data prep, training, evaluation, and logging.
- Integrated MLflow to track 40+ model experiments and manage model versions across environments.
- Built Airflow DAGs to automate weekly retraining jobs triggered by new S3 and Redshift data.
- Containerized the pipeline using Docker for consistent environments across dev, test, and prod.
- Deployed inference APIs with FastAPI supporting real-time claim scoring under 500ms latency.
- Added data quality gates using Great Expectations to validate input schemas pre-training.
- Hosted models on SageMaker with blue-green deployment for safe rollout and rollback control.
- Monitored model metrics and drift in Grafana via Prometheus-integrated dashboards.
- Reduced model update cycle from 14 days to <24 hours, boosting fraud detection accuracy.

Capri Global (Oct 2020 – Jul 2022**)**
ML Engineer

- Analyzed 8M+ records of loan data to identify default and churn predictors.
- Trained XGBoost models achieving 85% AUC, outperforming legacy logistic regression models.
- Incorporated alternate data (GST, utilities) to score low-credit SME borrowers more accurately.
- Engineered customer features like income stability and payment anomalies using SQL & PySpark.
- Designed a two-stage scoring model for pre-qualification and full credit risk assessment.
- Built lead scoring models using behavioral and credit data, increasing sales conversions by 18%.
- Automated retraining pipelines using Jenkins integrated with Git-controlled model configs.
- Detected gender and region bias, retrained models with stratified sampling for fairness.
- Integrated credit scores into CRM via REST APIs for real-time loan officer decisioning.
- Delivered Tableau dashboards for business leaders showing approvals, defaults, and lead quality.

EDUCATION

- **Master of Professional Studies in Data Science**   **Aug 2022 – Aug 2024**
  University of Maryland Baltimore County
  Coursework: Machine Learning, Advanced Algorithms, Data Structures
- **Bachelor of Technology in Computer Science Engineering**   **Jul 2018 – May 2022**
  Malla Reddy College of Engineering and Technology, JNTUH University, Telangana, India
  Coursework: Database Management Systems, Operating Systems, Data Structures and Algorithms