Derek Lankeaux Resume

Derek Lankeaux

Research Engineer | Machine Learning | Applied Statistics
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SUMMARY — Applied statistician with expertise in ML, ensemble methods, and LLMs. Production-ready ML pipelines with state-of-the-art performance. Strong Bayesian statistics and responsible AI foundation.

EDUCATION — **M.S. Applied Statistics**, Rochester Institute of Technology (Expected 2026)
Machine Learning, Bayesian Statistics, Deep Learning, NLP, MLOps

SKILLS
• **Languages:** Python, R, SQL • **ML:** XGBoost, LightGBM, AdaBoost, PyTorch, TensorFlow
• **LLMs:** GPT-4, Claude, Llama, LangChain, Hugging Face • **XAI:** SHAP, LIME
• **Stats:** PyMC, MCMC, Hypothesis Testing • **MLOps:** MLflow, FastAPI, Docker, CI/CD

RESEARCH PROJECTS

Ensemble ML for Breast Cancer Classification (Jan 2026)
8 ensemble algorithms on WDBC; AdaBoost: **99.12% acc**, **100% prec**, **98.59% rec**, ROC-AUC 0.9987. SMOTE, RFE ($30\rightarrow15$ features), SHAP explainability. *Python, Scikit-learn, XGBoost, LightGBM, MLflow*

LLM Ensemble for Textbook Bias Detection (Jan 2026)
GPT-4/Claude-3/Llama-3 ensemble + Bayesian hierarchical modeling. **67,500 ratings**, **4,500 passages**. Krippendorff's $\alpha=0.84$. Significant bias detected ($p<0.001$). *Python, PyMC, OpenAI/Anthropic APIs, LangChain*

COMPETENCIES: Ensemble Learning (Expert) • Bayesian Modeling (Advanced) • LLMs (Advanced) • XAI (Advanced) • MLOps (Proficient)

INTERESTS: Healthcare AI • Responsible AI • NLP Research • Bayesian Inference