LUCAS BENNETT

Data Scientist / Machine Learning Engineer

SUMMARY

I am an experienced AI Engineer and Machine Learning Researcher with a strong background in developing, deploying, and communicating advanced machine learning solutions. My expertise spans Python, deep learning, statistical analysis, and end-to-end model deployment using tools such as Docker, MLflow, and AWS. I have a proven track record of translating business questions into scalable data science solutions, working with sensor and telemetry data, and presenting complex findings to both technical and non-technical stakeholders. I thrive in fast-paced, multidisciplinary teams and am passionate about driving innovation and delivering value across diverse business domains.

EXPERIENCES

AI Engineer - DeepMetric Labs (Jan 2023 - Present)

As an AI Engineer, I designed and implemented a real-time fraud detection system using graph neural networks, which reduced false positives by 34%. I led the deployment of machine learning pipelines using MLflow and Docker across distributed AWS infrastructure, ensuring scalable and reliable model delivery. I collaborated closely with data science and DevOps teams to streamline model testing and CI/CD processes, and regularly communicated complex technical concepts to both technical and non-technical stakeholders.

Machine Learning Researcher - NovaCortex AI (Sep 2020 - Dec 2022)

At NovaCortex AI, I developed a custom transformer-based architecture for sentiment-aware summarization, improving ROUGE scores by 17%. I published research in top-tier AI conferences and led internal workshops on explainable AI and model interpretability tools such as SHAP and LIME. My work involved translating business questions into data science problems, developing and tuning models, and presenting findings to diverse audiences.

MY PROJECTS

AutoPilotSim – Self-Driving Car Simulation Platform

I built a reinforcement learning environment in Unity using ML-Agents to train agents on lane-following and obstacle avoidance. I integrated PPO and SAC algorithms with real-time telemetry visualization, demonstrating my ability to work with sensor and telemetry data in a simulated IoT context.

FaceGuard – Deepfake Detection Tool

I designed a binary classification model using EfficientNet and LSTM to detect facial manipulation in videos, achieving 94% accuracy on the DeepFake Detection Challenge dataset. I implemented Grad-CAM for interpretability and confidence heatmaps, ensuring transparency in model predictions.

MedNerPro – Clinical Entity Recognition System

I developed a deep learning pipeline for extracting medical entities from unstructured clinical notes, combining BiLSTM-CRF and BERT-based embeddings (BioBERT) to achieve a 91.3% F1 score on the i2b2 dataset. I integrated spaCy and Streamlit to create an interactive demo for real-time analysis, focusing on privacy-preserving training techniques.

EDUCATION

M.Sc. in Artificial Intelligence, University of California, Berkeley (2018 - 2020)

GPA: 3.9/4.0

B.Sc. in Computer Science, University of Washington (2014 - 2018)

GPA: 3.8/4.0

CONTACT INFO

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HARD SKILLS

Python • PyTorch • TensorFlow • scikit-learn • Transformers (HuggingFace) • OpenAI API • LangChain • Reinforcement Learning • Computer Vision • NLP • MLops: Docker • MLflow • Airflow • AWS Sagemaker • Git • Linux • REST APIs • SQL

SOFT SKILLS

Strong analytical and problem-solving mindset • Clear technical communicator • Passionate about learning and knowledge sharing • Excellent team collaboration and mentorship experience • Adaptable in fast-paced, agile environments