Kabiir Krishna

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SKILLS

- **Programming Languages**: Python, SQL
- **Tools & Frameworks**: LangChain, Ollama, Streamlit, PyTorch, HuggingFace, Scikit-learn, PowerBI, Tableau, MySQL, Databricks (Snowflake), Git, Docker, Kubernetes, Apache Kafka, PySpark, JIRA, AWS (VPC, EC2, S3, CloudWatch, Lambda)
- **LLM/NLP**: LLM Fine-tuning (RLHF), Prompt Engineering, Sentiment Analysis
- **Skills**: Data Engineering, Data Science, AI/ML Forecasting, Feature Engineering, Data Cleaning, Data Visualization, Microservice Orchestration, Agile Software Development
- **Certifications**: AWS Cloud 101, Databricks Fundamentals, Data Analysis with Databricks, Data ingestion with Databricks

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PROJECTS

End-to-end RLHF pipeline for safe response optimization using prompt pairs, PPO, and reward modeling with PyTorch & HuggingFace.   *PyTorch* | *LangChain* | HuggingFace   ([Repository](#))

Custom GPT-style language model for next-word prediction using Bigram & Transformer (GPT) architectures using PyTorch.   *PyTorch*   ([Repository](#))

Proof-of-concept - enhancing CERN's CLI workflow with LLM-powered task automation by integrating Microsoft Phi-2 into Ganga CLI using PyTorch.   *PyTorch* | *Microsoft Phi-2* | *Ganga CLI*   ([Proof of concept](#))

Sentiment dashboard for IMDb reviews using LSTM trained on weak/strong labels (VADER & DistilBERT) with Streamlit UI.   *PyTorch* | *Streamlit* | *DistilBERT* | *VADER*   ([Repository](#))

Cricket Data ETL and performance analytics pipeline using PySpark, SQL & Seaborn on Databricks/AWS to support match strategy planning.   *PySpark (Apache Spark)* | *Databricks (Snowflake)* | *AWS* | *Seaborn (Matplotlib)* | *SQL*   ([Repository](#))

EXPERIENCE

LLM Trainer   Nov'24 – Present
Outlier.AI, Canada

- Fine-tune LLMs (GPT-X etc.) using Reinforcement Learning from Human Feedback to improve response relevance for coding tasks by scoring base model's response w.r.t accuracy, truthfulness etc. & writing new responses to tune Reward Model.
- Hands-on experience training agents via demonstration and feedback across real-world web-based workflows, annotating step-wise actions to improve training.

Full Time, Cyber Security Specialist – One Cyber   Jul'21 – Aug'23
PricewaterhouseCoopers (PwC)

- Developed NLP pipelines for automated threat analysis of security telemetry logs (>1 million rows) through anomaly detection (LSTMs and Random Forest classifiers) with an F1-score around 0.9.
- Developed and deployed interactive dashboards (Power BI, Tableau) to visualize real-time data security policy violations, offering actionable insights & leading to reduction in enterprise-wide cyber risks by ~25% (number of ISO 27001 controls).

Co-Op, SWE - DevOps & Data-Engineering   Apr'20 – Jun'20
IBM

- Built scalable ETL pipelines and microservices (Docker, Kafka, Kubernetes) for real-time incident reporting.
- Created & annotated custom video datasets for training, leading to better mean average precision for models (TinyYOLO etc).

Co-Op, ML - Data Analyst   May'19 – Jul'19
Deloitte (Touche Tohmatsu LLC)

- Developed sentiment & trend analysis engine for scraped (selenium) FMCG data using VADER, PySpark, and Sklearn.
- Built Power BI dashboards to visualize key metrics & deliver actionable insights to drive data-driven strategies.

EDUCATION

Master of Engineering, *University of Waterloo, Waterloo, Ontario*   Sep'23 – Oct'24
M.Eng in Electrical and Computer Engineering (specialization in Software Engineering); CGPA 3.9/4

Bachelors of Technology, *Vellore Institute of Technology, Vellore, Tamil Nadu*   Jul'17 – Jul'21
B.Tech in Electronics & Comm. Engineering (specialization in IoT & Sensors); CGPA 8.39/10