SARAH MANSOOR

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Summary

Dynamic Computational Mathematician with a proven track record at Mobius Logic Inc., specializing in LLM training and innovative techniques like LoRA. Adept in Python and data analysis, I excel in transforming complex data into actionable insights while fostering collaboration across teams. Passionate about leveraging technology to drive impactful solutions.

Experience

Mobius Logic Inc. - **Computational Mathematician**   *05/2024 - Current*
Dallas, Texas

- Executed training on LLMs (Llama, Falcon, Mistral) with multiple parameters and templates.
- Implemented innovative techniques such as LoRA and RAG for advanced functionality.
- Employed GPUs in VSCode environment for running vLLM and oobabooga projects in Python.
- Performed Red teaming evaluations on LLM models targeting toxic and biased outputs.

Data Analytics Consultant - **Lactalis Canada**   *01/2023 - 08/2023*
Toronto, Canada

- Executed thorough exploratory data analysis with Power BI and AWS to inform key operational strategies.
- Synthesized business requirements into actionable technical requirements for reporting and database development.

Graduate Research Assistant - **Wilfrid Laurier University**   *09/2022 - 08/2023*
Waterloo, Canada

- Developed method for simulating market outcomes under counterfactual conditions in electricity markets.
- Utilized structural economic analysis and optimization techniques with Python's TensorFlow and Keras.
- Established scalable automated processes for developing, validating, and implementing machine learning models.

Enbridge - **IT Analyst**   *06/2021 - 12/2021*
Toronto, Canada

- Participated in diverse stages of Software Development Lifecycle (SDLC).
- Crafted Business Requirements Document summarizing key requirements from business stakeholders.

Education

08/2023
Wilfrid Laurier University
Waterloo, Canada
Master of Science: Management Analytics
Coursework in Machine Learning, Econometrics, Data Visualization, Data Management and Organization, Business Applications of Artificial Intelligence, Decision Making with Analytics

06/2022
University of Toronto
Toronto, Canada
Bachelor of Science: Major Statistics and Mathematics, Minor Computer Science

Skills

- **Programming & Data Tools**: Python, SQL, R, Java, Bash, Git, Power BI, Tableau
- **Data Engineering & Databases**: MySQL, PostgreSQL, MongoDB, NoSQL, Pandas, NumPy, embedding generation, semantic search, vector databases (FAISS, Pinecone)
- **Machine Learning & LLMs**: Fine-tuning, prompt engineering, Retrieval-Augmented Generation (RAG) pipeline design, evaluation & benchmarking, red teaming for bias/safety, Hugging Face Transformers, Keras, scikit-learn
- **Cloud & DevOps**: Azure (VMs, AI Studio, serverless endpoints), AWS, Google Cloud, cloud resource management & cost optimization
- **MLOps & Experiment Tracking**: Deployment of LLM APIs, Docker, MLflow, Weights & Biases

Websites

- https://www.linkedin.com /in/sarahmansoor/
- https://sarahamansoor.wixsite.com/website