Bradley Pfeil

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Education

The University of Adelaide *2022 – 2024*
Bachelor of Computer Science (Advanced)

Work Experience

Data Scientist – Streamline (Aurizn / Lunio) *2024 – Current*

Currently lead Data Scientist for the Streamline team, owning end-to-end pricing model design and evolution, including pricing logic, optimisation strategies, production validation, monitoring, and customer explainability standards. Developed and optimised a dynamic pricing model for multiple companies, identified and resolved scaling bottlenecks halving inference time and enhancing revenue forecast accuracy. Given the responsibility of AWS MLOps and support for the company. Additionally, reviewed inefficienceis in cloud infrastructure and implemented a cost monitoring/reporting framework that reduced monthly AWS spend by 20%+. Founded and lead a journal review club, fostering team growth through discussion of AI/ML research.

Intern / Graduate Data Scientist – Aurizn *2023 – 2024*

Developed LLM-based recommender systems with SHAP-driven explainability to surface model decision logic for non-technical stakeholders. Conducted analysis of data ingestion and retraining pipelines for dynamic pricing project, implementing an automated retraining workflow that ensured consistent model accuracy and reduced manual maintenance.

Projects

Adaptive Database Optimizer *2025*

Developed an adaptive system that observes SQL query workloads and incrementally optimizes physical data layouts (partitioning and sorting) for databases. Implemented workload logging, layout proposal, dataset rewriting, and performance evaluation in a closed feedback loop, allowing the system to learn which layouts perform best under changing access patterns.

QueryGPT: NL-to-SQL Pipeline *2025*

Built a multi-agent natural language to SQL pipeline that decomposes user queries into intent detection, table selection, column pruning, and query generation. Focused on reducing token usage and failure modes by enforcing structured intermediate outputs. Integrated ‘llama-index‘, ‘pydantic-ai‘, and a Neo4j vector store to support retrieval-augmented generation and improve maintainability as schemas evolve.

Markov Decision Process Framework *2025*

Implemented a framework for defining and solving Markov Decision Processes with explicit time-dependent state representations. Designed utilities for estimating stochastic transitions from data and computing optimal policies for sequential decision problems, with a focus on dynamic pricing and capacity-constrained revenue optimisation.

Languages & tools

Proficient: Python, SQL, PySpark, PyTorch, AWS, IAC, Git **Experienced:** R, Java, C++

Additional Experience

- Scrum Master Certificate 2025