Sagar Murgan

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Data Analyst | Data Science
Machine Learning ● Python ● SQL ● Model Evaluation ● Feature Engineering ● Analytics

Data Analyst with experience building Python and SQL pipelines, validating complex operational datasets, and delivering Power BI dashboards used by engineering, project, and leadership teams. Strong at defining KPIs, reconciling metrics across systems, and translating technical data into clear, decision-ready insights for non-technical stakeholders.

Experience

Data Science Intern, Sankyu Saudi Arabia Company   Saudi Arabia/Remote Jan 2024 – April 2024
- Migrated a local SQLite tool to a **Serverless PostgreSQL (AWS) cluster**, implementing secure Secret Management to enable global data synchronization for teams across Canada and the Middle East.
- Engineered a **"Work Order 360" relational model** that unified fragmented maintenance, QC, and safety logs into a single source of truth, quantifying operational "Time-Loss" patterns to drive productivity.
- Developed a **high-performance Streamlit/Python dashboard with ETL pipelines** that resolved critical character-encoding and type-coercion issues, ensuring 100% accurate real-time KPI reporting.

CompSci Tutor, ADA's TEAM   Edmonton Sept 2023 - Jan 2024
- Mentored students in Python, algorithms, and foundational machine learning concepts, reinforcing model intuition, problem decomposition, and analytical reasoning.

Projects & Personal Experience

BIM Connectivity Link Prediction using Graph Neural Networks   Edmonton — Jan 2025 – Apr 2025
- Worked with **Building Information Modeling (BIM) data** to model, validate, and analyze building components and relationships, ensuring data consistency for downstream analysis; contributed to a peer-reviewed research publication.
- Designed and tested **feature definitions and assumptions** on real-world construction asset data, collaborating with technical stakeholders to validate model outputs against practical building structures.
- Evaluated model performance through **benchmarking and ablation studies**, translating results into clear recommendations to support engineering design decisions.

P_AI (Personal AI Assistant)   Edmonton July 2025 - Ongoing
- Built a document ingestion and retrieval system to support **studying and concept explanation** from textbooks and notes, enabling fast lookup and contextual explanations during exam preparation.
- Designed structured data pipelines using FastAPI and PostgreSQL to store, index, and retrieve study materials, emphasizing **clarity, relevance, and reliability** of returned information

Vortex — Lottery Events App   Edmonton — Sept 2024 – Nov 2024
- Worked in an **Agile/Scrum** environment, using user stories and a product backlog to plan, track, and deliver features aligned with entrant and organizer requirements.
- Supported backend data and workflow improvements to enable reliable **real-time event updates and notifications** for multiple user roles using FCM(Firebase Cloud Messaging).

Education

- **University of Alberta** — B.Sc. Computer Science (Specialization) with Business Minor   Sept 2021 – Jan 2026
- **Relevant Coursework:** Machine Learning, AI Capstone, Algorithms I–II, Reinforcement Learning, Predictive Analytics , Search & Planning in AI

Skillset

- **Programming & Query:** Python(Pandas, SQLAlchemy, Psycopg2), SQL (PostgreSQL, MySQL), R, JS, React
- **Analytics & Reporting:** Data Cleaning, KPI Definition, Exploratory & Statistical Analysis, Reporting
- **BI & Visualization:** Power BI (DAX, data modeling), Tableau, Excel, Power Query
- **Data Engineering:** ETL/ELT, Data Validation, Metric Standardization, Data Documentation
- **Cloud & Tools:** Azure (data platforms), AWS (S3, EC2), Git, Docker, REST APIs, Neon Serverless, SQL Schema Design, Secret Management, Streamlit

Certifications

- AWS Cloud Practitioner ● AMII Reinforcement Learning System (Capstone)