

Saffat Bokul

Machine Learning / AI Engineer

Winnipeg, Canada | [LinkedIn](#)

I work at the intersection of machine learning, Artificial Intelligence, software engineering, and data infrastructure. I partner with business, strategy, and operations leaders to understand the decision they actually need to make, decompose it into a technical problem, and build the pipeline, model, or agent that makes that decision repeatable.

Currently, I'm in Strategy, Planning & Analytics at The North West Company, a \$3B multi-banner retailer operating across Canada, Alaska, the Caribbean, and the South Pacific.

My work includes:

- Building internal agentic AI workflows over governed enterprise data to automate recurring analytical work—producing structured briefings, retrieving metric definitions, surfacing promo/labour exceptions, and helping strategy teams move from raw data to decisions faster.
- Engineering some of the company's first in-house dbt semantic models and Dagster-orchestrated Snowflake pipelines, creating a governed and reusable data foundation for executive and operational reporting across sales, margin, labour, shrink, promotions, out-of-stocks, private label, and other core KPIs.
- Developing promotion and labour decision-support analytics across multiple retail banners, using lift-vs-baseline, price sensitivity, promotion effectiveness, UPLH, forecasting, and profitability analysis to identify performance drivers, flag underperforming initiatives, and support better pricing, promotion, and labour-allocation decisions.

Previously at Birchwood Automotive Group, I built production data and ML systems across AWS and Snowflake—engineering pipelines processing \$1B+ records, helping create a 500K+ customer identity layer, delivering integrations contributing to ~\$3M in annual savings, and training/deploying predictive ML models through Amazon SageMaker.

My ML foundation comes from my M.Sc. in Computer Science, where I developed deep-learning models for molecular transition-state discovery using Python and PyTorch, reducing a computational process from weeks to hours.

I am focusing on Production AI/ML systems: PyTorch, RAG, agentic AI, LangGraph, Hugging Face, vLLM/SGLang, inference/model serving, AWS/SageMaker, Docker, Snowflake/dbt/Dagster, evaluation, observability, and distributed systems.

Interested in ML Engineer, AI Engineer, SWE-ML, ML Platform, and AI Platform roles in Toronto/GTA or Vancouver.

Open to relocation.

EXPERIENCE

Data Analyst

The North West Company

Mar 2026 — Present
Winnipeg, Manitoba, Canada

- Prototyping agentic AI workflows that combine enterprise data access, business context, and tool-based analysis to automate repeatable analytical investigations and produce structured, traceable decision support.
- Developed Bayesian ML, causal inference, synthetic-control, and price-elasticity models across different product classes to measure true promotional incrementality and discount sensitivity, identifying “discount cliffs,” separating genuine demand lift from margin-destructive promotions, and surfacing opportunities to improve sales, volume, and margin performance.
- Building the data foundation for an enterprise executive performance platform designed for daily use by senior leadership, engineering Snowflake data pipelines, reusable dbt transformation models, and Dagster-orchestrated workflows in a Linux environment to feed governed Tableau reporting.
- Own key technical and analytical work within enterprise promotion-performance initiatives spanning retail operations in Canada, Alaska, and the Caribbean, developing reproducible analyses for incremental sales/volume/margin lift, promotional baselines, price sensitivity, promotion effectiveness, and product/promotion interactions.

Data Analyst

Birchwood Automotive Group

Sep 2024 — Feb 2026
Winnipeg, Manitoba, Canada

Built the data and ML platform behind retail analytics for a large automotive group. Official title was Data Analyst; the work spanned data engineering, orchestration, APIs, ML development, model serving, and data science.

Data & ML Platform:

- Built Snowflake dimensional models with 100B+ rows using Python, PySpark, dbt, and REST/SOAP APIs, improving operational query performance by ~30% and establishing reusable, tested transformation layers for analytics and ML.
- Engineered Dagster/Airflow pipelines with CI/CD and Grafana monitoring across jobs and Snowflake usage, reducing failed runs by ~90% and improving pipeline observability and reliability.
- Built S3 + Snowpipe ingestion for dealer-management data and FastAPI services over curated datasets, enabling 3+ teams to self-serve data while replacing third-party reporting/consulting costs worth ~\$3.3M annually.

ML / AI in Production

- Built an entity-resolution pipeline using Python, EMR, S3, and EC2 across 20M+ records / 10+ sources, creating a 500K+ unified customer view and reducing duplicate identity noise by ~95%.
- Developed versioned feature pipelines and a foundational Snowflake customer asset supporting 5+ ML/analytics capabilities including churn, CLV, segmentation, targeting, and retention.
- Trained, evaluated, deployed, and monitored churn/survival models in Amazon SageMaker, surfacing predictions through Sigma to 500+ users and supporting retention strategies that reduced churn by ~25% in targeted segments.
- Applied Amazon Bedrock to unstructured customer-feedback scoring and causal/marketing-mix modeling to ~\$250K+ in spend, contributing to ~5-point NPS improvement and ~30% lower CAC through better targeting and budget allocation.

Graduate Research Assistant

University of Manitoba

Sep 2021 — Oct 2023
Winnipeg, Manitoba, Canada

- Accelerated the process of finding transition states (for drug design) from a few weeks to hours by theorizing and implementing a novel machine learning architecture leading to novel candidate transition states.
- Processed data of 100,000 complex molecules in the form of graphs using Python, PyTorch, Sci-kit Learn and created visualizations, dashboards and reports for data analysis.
- Examined and tuned experimental deep learning models using a series of metrics to clearly communicate findings with stakeholders, to plan future research direction.
- Collaborated with interdisciplinary researchers to explore the use of artificial intelligence in pharmacology, self-learning about techniques like computational chemistry, molecular dynamics, graph machine learning in 3 months.

Software Engineer - QA

Orbitax

Aug 2020 — Jul 2021
Dhaka, Bangladesh

- Developed test automation suite using JMeter saving 100 hours each week in combined QA time, by using an agile approach to test automation which delivered value and minimized technical debt.
- Acquired the ownership of testing the Orbitax Entity Tracker and resolved over 100 bugs by collaborating with the product manager, developers, and other stakeholders.
- Identified test scenarios by reviewing user stories for Orbitax International Tax Platform, and created test cases, designed test scopes, set testing strategy with 90% coverage.
- Helped with onboarding and mentoring new team members, created training guides, offered one-on-one mentorship leading to 50% quicker onboarding.

Teaching Assistant

BRAC University

Oct 2018 — Apr 2020
Dhaka, Bangladesh

- Assisted professors with grading, course content research for 150+ students leading to 20% quicker outcomes.
- Instructed lab classes, created lab assignments and solutions, assisted with exam invigilation.
- Helped students build a strong foundation in CS concepts with a tailored tutoring approach.
- Fostered an inclusive learning environment, accommodating students with disabilities and other needs.

EDUCATION

University of Manitoba

Master of Science - MS in Computer Science

Grade: 4.1/4.5

TensorFlow, Deep Learning and +5 skills

Sep 2021 — Aug 2023

BRAC University

Bachelor's degree in Computer Science & Engineering

Grade: 3.90/4.0

TensorFlow, Deep Learning and +6 skills

Jan 2016 — Jan 2020

PROJECTS

Generating Voronoi Regions: A Data Based Approach

Using PyTorch and Python

CERTIFICATIONS

Computer Science Progression Award, University of Manitoba

Jan 2022

Computer Science Entrance Award, University of Manitoba

Aug 2021

Graduate Enhancement of Tri-Agency Stipends (GETS), University of Manitoba

Aug 2021

International Graduate Student Entrance Scholarship, University of Manitoba

Aug 2021

Research Manitoba Masters Studentship, Research Manitoba

Aug 2021

Brac University Dean's List, BRAC University

Brac University Merit Based Scholarship, BRAC University

Brac University Vice Chancellor's List, BRAC University

Classification of Non-Topological Magnetic Configurations Using Machine Learning,

SKILLS

Data Science · Artificial Intelligence (AI) · Machine Learning Algorithms · Inference Engineering · Data Engineering · Agile Methodologies · Computer Vision · REST APIs · Apache Spark · Test Automation · Microsoft Azure ·

Kubernetes · Large Language Models (LLM) · Langchain · FastAPI · React TS · Teaching · Continuous Integration and Continuous Delivery (CI/CD) · NumPy · Pandas (Software)