KUSHAL MOHEE
AI/ML RESEARCH ENGINEER

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PROFILE

AI Research Engineer who leverages state-of-the-art research to build automation tools that solve critical efficiency bottlenecks. Combines a rigorous academic background with practical engineering discipline to deliver automated solutions that are secure, reclaim engineering hours and reduce compute costs.

SKILLS

Languages: Python, SQL, Bash, Haskell, Prolog.
AI & Data Engineering: PyTorch, TensorFlow, Triton, CuTile, Databricks, Spark, NumPy, Pandas.
MLOps & Cloud: Kubernetes, Docker, Terraform, AWS, Azure, MLflow, Helm, Istio, Prometheus.
DevTools & Viz: GitLab CI, GitHub Actions, Grafana, Looker, Tableau, Plotly Dash, Seaborn.

EDUCATION

University of Edinburgh (United Kingdom)

Master of Science in Artificial Intelligence
Sept. 2025 - Aug. 2026

Thesis (self-proposed): Closed-Loop Neuro-Symbolic Generative Framework for Private Counterfactuals.
- Developing a novel framework under Dr. Vaishak Belle that integrates Logic Tensor Networks (LTN) with generative models. The research focuses on formally verifying privacy constraints in counterfactual explanations without sacrificing generative fidelity.

Relevant Coursework: Probabilistic Modelling and Reasoning, Distributed Systems, Machine Learning Systems, NLP

University of British Columbia (Canada)

Master of Management (Sauder School of Business)
June 2020 - May 2021

Internship: Strategic Business Analyst at VINN Automotive (Recipient of Mitacs Business Strategy Grant)

Bachelor of Science
Sept. 2016 - May 2020

Major: Cognitive Systems (Computational Intelligence and Design) - Dean's Honour List
Directed Studies: Conducted experimental research on visual cognition and ideomotor effects

WORK EXPERIENCE

Boeing - Vancouver, BC

AI DevOps Engineer
Aug. 2024 - Aug. 2025

- Deployed a production ML-powered dashboard on cloud infrastructure, hardening the application to withstand rigorous penetration testing and threat modelling exercises.
- Provisioned Azure Infrastructure including Kubernetes using Terraform and Gitlab Pipelines to automate ML infrastructure deployment cutting time-to-deployment by half.
- Optimized similarity search app (pytorch code) to return queries in 6s instead of 5mins.
- Co-designed an ML Inference Pipeline to create a new feature to be displayed on a dashboard.

Getty Images (via ProCogia) - Vancouver, BC
Jul. 2023 - Jul. 2024

Data/MLOps Engineer

- Reduced ML model retraining time from a labour-intensive 30-day effort to a 5-day process by implementing a multi-pipeline system in Gitlab, Python and AWS.
- Increased the speed of Spark ETL jobs from 10 hours to 1 hour, reducing the time required to pull data for ML training.
- Developed an AWS EMR Cluster monitoring solution using Prometheus and Grafana, implemented through Terraform, saving data scientists valuable hours and enhancing overall productivity
- Realized projected annual cost savings of $50,000 of idle time for EMR clusters by implementing an auto-termination system using AWS CloudWatch, SNS, and Lambda.

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VINN Automotive Technologies Limited - Victoria, BC

Data Engineer
Jan. 2022 - Apr. 2023

- Engineered PySpark ETL pipelines to ingest gigabytes of data via RESTful APIs, achieving a 5x increase in speed.
- Constructed an MLOps pipeline to deploy TensorFlow vehicle recognition models into production environments.
- Automated Databricks SQL workflows and built Looker dashboards, identifying optimizations that saved $100/day in ad spend.

Jr. Data Engineer (Recipient of Athena Digital Leaders Grant)
Aug. 2021 - Dec. 2021

- Designed and implemented an AWS Lex chatbot integrated with Facebook Messenger, automating real-time customer support interactions.
- Deployed and maintained a Flask web app on Heroku for another team to clean raw data, and send KPIs to partners.
- Implemented a scraper tool to double the size of datasets for data scientists to train image recognition models.

SELECTED PROJECTS

NeuroScope (Personal Project)
2026

Stack: PyTorch, gRPC, Transformer Circuits, Streamlit.
- Designed a streamlit dashboard to visualize internal activations of LLMs sharded across multiple nodes.
- Implemented pipeline parallelism using PyTorch Distributed RPC to shard GPT-2's layers across 3 worker nodes, allowing for the extraction of intermediate activation vectors from distinct model partitions in real-time

Edinburgh University Formula Student (Extra-Curricular)
2025 - 2026

Stack: Python, C++, ROS 2, GitLab CI, Colcon, LCOV.
- Accelerated development velocity across all software sub-teams by implementing GitLab CI caching strategies for colcon builds, drastically reducing pipeline runtime.
- Engineered a custom Python coverage module to unify colcon test, pytest, and lcov outputs, creating a solution for ROS 2 coverage integration with pytest where no off-the-shelf tool existed.

CareerPulse (Personal Project) - AI-Powered Job Application System
2025

Stack: Python, Celery, Redis, Docker, Mistral 7B, Notion API.
- Architecture: Designed a modular microservices architecture (Python packages) intended for containerized pod deployment, utilizing Redis for high-speed deduplication and Celery for asynchronous task orchestration.
- AI Pipeline: Implemented a two-stage inference workflow: first performing semantic similarity search to dynamically select the optimal resume version (out of 3), then leveraging Mistral 7B to generate context-aware cover letters.
- Data Engineering: Built a resilient ingestion engine that aggregates data via APIs and custom scrapers, assigning unique time-based identifiers and syncing structured results to a Notion database.
- Roadmap: Currently architecting a "Relevance Ranking" module to assign priority scores and "HOT" tags based on job alignment metrics.

CERTIFICATIONS

Databricks Certified Data Engineer Associate - 2023
Databricks Spark Certified Developer – 2022

LANGUAGES

English - Fluent
French - Fluent
Mauritian Creole - Native