

Alassane Diop

ML / AI Engineer

alassanediop@gmail.com · Montréal, Canada · alassane.ai · linkedin.com/in/alassanediop

PROFILE

ML / AI Engineer with 5 years of experience building production AI systems — recommendation engines, semantic search, LLM pipelines. Proven at taking models from research to deployment, including Mitacs-funded recsys work. M.Sc. HEC Montréal + Computer Engineering, top of class at École Polytechnique de Thiès.

SKILLS

Languages: Python, SQL, JavaScript, TypeScript

AI & ML: Large Language Models (LLMs — Claude, OpenAI, Gemini), Retrieval-Augmented Generation (RAG), Recommendation Systems, Semantic Search, Multimodal Embeddings, Ranking Models, NLP, Prompt Engineering, Fine-tuning, Collaborative Filtering (ALS, SVD, KNN, RankFM), Spectral Embeddings

Frameworks & Libraries: PyTorch, scikit-learn, HuggingFace, pandas, NumPy

Data & Infrastructure: GCP, Snowflake, Snowflake Cortex, dbt, REST APIs, Event-Driven Pipelines, Semantic Layer Design, Model Monitoring

Engineering: React Native (Expo), Next.js, macOS Native App Development, Git, CI/CD, AI Coding Tools (Cursor, Claude Code)

RECENTLY SHIPPED AI PRODUCTS

- **Olima.ai** — Shipped a visual mobile AI game orchestrating Gemini (asset generation), Claude (codebase), and GPT-5 (in-game mascot agent)
- **Vibecope.ai** — Shipped a macOS menu-bar prompting helper for Claude Code & Cowork with long-context awareness; built from personal need, packaged as a product
- Owned full lifecycle: architecture, analytics (GA4, Meta), release engineering, and go-to-market

EXPERIENCE

ML Engineer / Data Scientist · Browns Shoes Inc. · Montréal, Canada *July 2023 – Present*

- Shipped a production recommendation engine delivering personalized suggestions across the catalog
- Designed an LLM-based NPS pipeline for automated sentiment analysis and structured insight extraction from unstructured customer feedback
- Developed a shoe recognition app matching user photos to catalog via embeddings + semantic search
- Built a Marketing Mix Model (MMM) quantifying ROI per paid channel; recommendations drove a ~20% reduction in spend while maintaining revenue

Specialist, Customer Analytics & CRM · ALDO Group · Montréal, Canada *March 2022 – July 2023*

- Built predictive models for customer segmentation, churn, and Customer Lifetime Value (LTV); enabled personalized targeting across email, paid media, and retention campaigns
- Designed RFM and behavioral segmentation strategies for CRM campaigns; implemented scoring systems and market basket analysis to optimize cross-sell and targeting
- Prototyped an AI-powered quality assurance tool (GPT + HuggingFace) to detect misleading product color descriptions on the e-commerce platform, reducing return risk

ML Engineer · Tastet.ca · Montréal, Canada *June 2021 – June 2023*

- Designed and deployed a hybrid recommender system on GCP with real-time, user-intent-driven ranking
- Benchmarked 8 ranking models (KNN, ALS, SVD, RankFM, cosine similarity, item popularity, multivariate normal) against F1-score and a custom fairness metric to balance accuracy with merchant equity
- Architected an event-driven ML pipeline with GCP Cloud Functions and weekly cron-based retraining
- Took the system from research to production; secured multiple rounds of Mitacs research funding and authored a thesis on state-of-the-art recommender systems and ethical AI

Data Engineer (Co-op) · ADNCorp · Dakar, Sénégal *September 2018 – September 2020*

- Data modeling, quality assessment, and R&D prototyping through a 2-year co-op; Master's thesis on production monitoring with error tracking for a large-scale manufacturer

EDUCATION

M.Sc. Data Science & Business Analytics · HEC Montréal *December 2021*

M.Sc. Computer Engineering · École Polytechnique de Thiès, Senegal *September 2020*