# Moeen Bagheri

AI Engineer | Toronto, ON, Canada
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## SUMMARY

AI Engineer with 8+ years of professional experience and 3+ years building production LLM agents and enterprise AI systems. Lead developer of BASF's Talk2Data, a module within FOX, with 7,000+ users. Winner of BASF's 2025 Digital Award and 2026 ICV Albrecht Deyhle Award for Controlling Excellence. Specializing in agentic workflows, evaluation frameworks, and LangGraph architectures that ship reliable AI products at scale.

## SKILLS

**Concepts**: Agentic Coding, AI Agent Design & Development, Fullstack & API Development, Evaluation & Testing, CI/CD, RAG, Time-Series Forecasting, Fine-tuning, Transfer Learning, Computer Vision, NLP
**Soft Skills**: Technical Leadership & Mentorship, Stakeholder Communication
**Languages**: Python, SQL, JavaScript, C#, R
**Tools & Frameworks**: LangChain/LangGraph, Databricks, MLflow, DevOps, Cursor, Claude Code, Docker, Git, PostgreSQL, Pandas, NumPy, PySpark, PyTorch, TensorFlow, LightGBM, Scikit-learn, HuggingFace, OpenAI API, Azure, Flask, FastAPI

## EXPERIENCE

**AI Engineer & Lead Developer** Oct 2024 - Present
*BASF – Toronto, ON, Canada*
Lead developer of Talk2Data, the data assistant within BASF's FOX platform. Winner of BASF's 2025 Digital Award and ICV Albrecht Deyhle Award for Controlling Excellence 2026.

- **Natural Language to SQL**: Built a LangGraph agent with *MLflow* tracing that answers questions using Databricks SQL and RAG, returning tables, charts, and analysis. Supports new data sources through configuration.
- **Executive Briefing**: Built a monthly briefing for finance leadership that used deterministic analysis to find KPI changes and drivers, an LLM to explain results in natural language, with grounding to ensure all findings are backed by evidence.
- **Website Assistant**: Implemented an agent to work within a website with *Power BI* reports and answer based on what the user sees on their screen.
- **Evaluation**: Built a framework to evaluate SQL accuracy, latency, and tool calls to catch regressions before release.
- **Dashboard Automation**: Built a *GitHub Copilot* multi-agent system to automate the process of *Power BI* report creation from intake files, with validation to ensure data and layout reliability. Onboarded BI developers new to coding agents.
- **Agentic Coding**: Built workflows in *GitHub Copilot* and *Cursor* to implement features, run tests and evaluations, review changes, and open pull requests across multiple repositories, with access to Microsoft Teams messages and meetings, Outlook emails, and *Azure DevOps* to gather necessary context, and a self-enhancing loop to improve itself over time.
- **Developer Acceleration**: Defined how to improve developer productivity and enable coding agents within BASF's company-wide AI program to help development teams turn ideas into working prototypes faster.

**Founder & AI Engineer** Sep 2023 - Oct 2024
*YT Copilot – Toronto, ON, Canada*
Built an AI Chrome extension app called YT Copilot to work inside YouTube.

- **YouTube Assistant**: Developed an AI agent for YouTube that summarized videos, organized content into chapters, answered questions about videos, conducted semantic searches, and identified promotional segments and interruptions. Implemented chunking and aggregation to process long videos.
- **Fullstack Development**: Developed the *JavaScript* frontend integrated with YouTube's UI, the *Flask / PostgreSQL* backend deployed on *Azure Kubernetes Service (AKS)* with *Docker*, *Ory Kratos* authentication, and *Stripe* billing.

**Machine Learning Engineer** Jan 2022 - Jul 2023
*Super GeoAI Technology Inc. – Toronto, ON, Canada*
Led a team of 7+ engineers developing computer vision models for agriculture.

- **Computer Vision**: Built object detection models in *PyTorch* and *TensorFlow* that graded seeds and estimated crop yield from photos taken with phones and drones. Increased efficiency by over **80%** for the agricultural partners.
- **Model Enhancement**: Improved accuracy by **10%** for seed grading and **15%** for wheat head detection by fine-tuning models pre-trained on *COCO* and *Pascal VOC* and tuning hyperparameters with *Ray Tune*.

**Machine Learning Researcher (Doctoral Research)** Jul 2021 - Jan 2022
*IBM – Toronto, ON, Canada*
NLP and transformer research to find conflicting or duplicated entries in SRS documents.

- **NLP**: Built *BERT*-based models in *PyTorch* and *HuggingFace* to detect conflicting and duplicate requirements in Software Requirements Specification (SRS) documents.
- **Model Optimization**: Improved F1-score by **20%** compared to the baseline by fine-tuning a Microsoft pre-trained model.

**Teaching Assistant - Practical Deep Learning (CIND850)** Sep 2021 - Dec 2021
*Ryerson University – Toronto, ON, Canada*
Taught Practical Deep Learning (CIND850) to graduate students.

- **Mentorship**: Delivered deep learning lectures and tutorials and mentored 20+ graduate students on model design and implementation.

**Quantitative Data Scientist** Jun 2014 - Aug 2018
*Electronica AI – Toronto, ON, Canada*
Built trading algorithms as a contractor throughout university.

- **Trading Algorithm Development**: Worked with 5+ engineers to design and develop high-frequency trading algorithms with a daily order flow of $10M+, and used machine learning to improve their predictive accuracy.

## EDUCATION

**Toronto Metropolitan University (formerly Ryerson)** – *Master of Science* Sep 2018 - Aug 2020
Data Science and Analytics – Toronto, ON, Canada **GPA: 4.33/4.33**

**University of Toronto** – *Honours Bachelor of Science* Sep 2013 - Jun 2017
Bioinformatics (Specialist), Computer Science (Major) – Toronto, ON, Canada
Graduated with high distinction; University of Toronto Scholar Award