Parya Abadeh

Toronto, ON | abadehparya@gmail.com | +1 437 6633055 | [LinkedIn](#) | OWP

SUMMARY

I don't just build models, I ship AI that people use. Applied AI Scientist specializing in NLP, LLMs, and production-ready AI systems. I thrive at the intersection of rigorous research and real-world impact, turning complex problems into scalable solutions that customers and businesses actually feel. Whether it's designing guardrails for deployed LLMs, building intelligent feedback systems, or forecasting at production scale, I bring both the technical depth to get it right and the engineering mindset to get it shipped.

WORK EXPERIENCE

Applied AI Scientist II | Homebase | 2025 - Present

- Built and deployed a production sales forecasting system delivering 7-day predictions to customers, achieving 18% sMAPE and 25% MAPE across live models.
- Designed Signal Scout, an AI-powered customer intelligence platform that unified NPS, App Store reviews, and in-app surveys into a single source of truth, cutting the time teams spend tracking customer sentiment by 10x and surfacing actionable insights directly to the CEO weekly.
- Leading R&D on LLM guardrails, running systematic benchmarks to select production-ready approaches.

Machine Learning Engineer| eSentire Inc | 2024 - 2025

- Pioneered and deployed MCP-Scanner, an automated security auditing tool for Model Context Protocol (MCP) servers, achieving a 100% detection rate; achieved through a multi-layer AI-driven detection stack, including regex signatures, semantic embeddings, and DeBERTa-based classifiers— published at **EnCyCriS @ ICSE 2026** and [open-sourced under eSentire Labs](#).
- Automated model and service deployments by building CI/CD pipelines with GitHub Actions and Docker, resulting in a 60% reduction in manual steps.
- Integrated and benchmarked LLM guardrail frameworks (PromptFoo, Garak, NOVA rules) within AWS Glue ETL jobs, processing 1M+ prompt logs in S3 and validating framework performance against 5K adversarial attempts.

Data Scientist -- NLP & ML Systems| University of Guelph | 2023 – 2025

- Led a large-scale NLP and statistical modeling study, analyzing over 2M social media posts and leveraging Mixed-Effect Models and Propensity Score Matching to quantify the link between music listening behavior and stress outcomes in different Mental Health conditions.
- Architected and implemented a novel mood-enhancing music recommendation system powered by Large Language Models (LLMs) that reduced user stress levels by 10%.

PUBLICATIONS

- **MCP-Scanner: Detecting Security Risks in Model Context Protocol Systems (first author)**
  EnCyCriS @ ICSE 2026, 2026 — [View Paper →](#)

- **Music Listening, Mental Health, and Stress: A Computational Framework for Personalized Analysis and Recommendation (first author)**
  ACM Transactions on Information Systems, 2025 — [View Paper →](#)

- **The Impact of Listening to Music on Stress Level for Anxiety, Depression, and PTSD**

IEEE Transactions on Computational Social Systems, 2025 — **View Paper →**

- **Exploring Hate Speech Dynamics: The Emotional, Linguistic, and Thematic Impact on Social Media Users**
  Information Processing & Management, 2025 — **View Paper →**

EDUCATION
- MSc in Computer Science | University of Guelph | 2023 – 2025
- BSc in Computer Engineering | Ferdowsi University | 2018 – 2023

SKILLS
- **Languages and Frameworks:** Python, SQL, Java (OOP), Django, REST API
- **AI/ML & Data Science:** PyTorch, TensorFlow, Scikit-learn, NLP, LLMs (GPT, BERT, T5), Databricks
- **Databases & Monitoring:** PostgreSQL, Vector Databases
- **Interpersonal:** Agile Development, Problem Solving, Team Collaboration, Rapid Learning