Shervin Khazaeli

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SUMMARY

AI leader and Principal-level Data Scientist with 10+ years of experience delivering machine learning solutions in civil infrastructure and utilities. Proven record in leading cross-functional teams, mentoring talent, and aligning AI projects with organizational strategy. Skilled at bridging technical and business stakeholders to deliver transparent, explainable, and high-impact AI. Actively advancing AI governance expertise (AIGP, PMP, Google Project Management) to ensure accountability and responsible adoption of AI.

AI LEADERSHIP & SELECTED PROFESSIONAL IMPACT

- **Trinnex (CDM Smith)** — Canada/USA
  Lead Data Scientist, Principal (Full-time) — *2022 - Present*
  - **Lead Service Line Prediction/Replacement**: Led a team of data scientists and MLOps engineer to design and deploy ML models on Google Cloud Platform (GCP) to predict material composition of water service lines for 65+ utilities across the U.S., directly complying EPA Lead & Copper Rule Revision (LCRR). Achieved $60M+ in client cost savings. Partnered with UI/UX teams and client stakeholders to ensure results were transparent, explainable, and actionable.
  - **Blockage Detection**: Directed cross-functional team of data scientists and MLOps engineers to design, develop, and deploy near-real-time anomaly detection in water sewage network (60+ sensors across the U.S.). Designed monitoring dashboards to enhance transparency, stakeholder trust, and model lifecycle governance.
  - **Toll Auditing**: Oversaw development of a computer vision (CV)-enabled toll auditing framework using video footage and ML for tolling events. The framework is deployed on GCP to meet scalability and latency requirements while establishing auditability measures for regulatory compliance.
  - **Agentic Systems**: Led a team of data scientists to design & develop proof-of-concepts agentic systems in water industries including water quality analysis (prompt chaining), Treatment plant monitoring (parallelization), Drought management system (orchestrator-worker), and treatment process optimiztion (evaluator-optimizer).
  - **Leadership & Mentorship**: Mentored junior and senior data scientists and AI engineers, promoting technical growth, ethical awareness, and cross-disciplinary collaboration with developers, engineers, and domain experts. Facilitated communication between technical teams and business leaders to align AI solutions with organizational strategy.
  - **AI Governance**: Designed & implemented procedures for AI accountability and transparency, ensuring responsible use of ML systems in client-facing products. Introduced governance frameworks (documentation standards, model explainability reviews) to ensure responsible AI adoption at scale.

FOUNDATIONAL EXPERIENCE

- **Polytechnique Montréal** — Canada
  Research Assistant (Full-time) — *2018 - 2022*
  - **Summary**: Created autonomous AI-based anomaly detection frameworks for civil infrastructure. Enhanced Bayesian dynamic linear models and integrated reinforcement learning for predictive monitoring. Delivered reports and insights to Ponts Jacques Cartier et Champlain incorporée, ensuring actionable outcomes. Mentored graduate and undergraduate researchers.
- **Sensequake Inc.** — Canada
  Consultant (Part-time, Contractual) — *2016 - 2017*
  - **Summary**: Designed and analyzed sensor-based seismic assessment models; designed trustworthy & reliable procedures for data acquisition and analysis.
- **Concordia University** — Canada
  Research Assistant (Full-time) — *2014 - 2017*
  - **Summary**: Built cloud-based AI solutions for structural health monitoring; developed probabilistic graphical models and taught graduate-level coursework.

CERTIFICATIONS

- **Artificial Intelligence Governance Professional (AIGP)** — IAPP
  Professional member, in-training via IAPP — *2025 - Present*
- **Project Management Professional (PMP)** — PMI
  Professional member, in-training, Credential ID: 9522710 — *2023 - Present*
- **Google Project Management Professional** — Google
  Credential ID: 5RCR3XCQB5ML — *Issued March 2025*

EDUCATION

- **Polytechnique Montréal** — Canada
  PhD- Civil Engineering (Artificial Intelligence)

HOBBIES

- **Private Pilot License (PPL)** — ALM Par Avion
  In-training with 10+ hours dual-flight. — *2024 - Present*
- **Mixed Martial Art (MMA)** — Apex Martial Art
  Muay thai & kick boxing at Apex Martial Arts school — *2016−Present*