Shervin Khazaeli

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SUMMARY

AI leader and Principal-level Data Scientist with more than a decade of experience designing and deploying advanced machine learning solutions across civil infrastructure, utilities, and enterprise systems. Proven track record in leading cross-functional teams, mentoring data scientists and engineers, and aligning complex AI projects with organizational strategy. Skilled communicator who bridges technical and business stakeholders to deliver transparent, explainable, and high-impact AI solutions. Actively advancing AI governance expertise (AIGP, PMP, Google Project Management) to ensure accountability and responsible adoption of AI.

AI LEADERSHIP & 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 supporting 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 agentic systems proof of concepts 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**: Planned & installed sensors, and acquired high quality sensory data for data analysis; Built data-driven models from sensory data for seismic assessment of civil structures. Prepared comprehensive assessment reports for the clients. Designed trustworthy & reliable procedures for data acquisition and analysis.

- **Concordia University** — Canada
  Research Assistant (Full-time) — *2014 - 2017*
  - **Summary**: Designed & implemented cloud-based solution for AI-based structural health monitoring using AWS. Developed framework for damage detection and identification using data-driven models. Designed & offered the course "Probabilistic Graphical Modeling" to build causality models in various disciplines.

CERTIFICATIONS

- **Google Project Management Professional** — Google
  Credential ID: 5RCR3XCQB5ML — *Issued March 2025*
- **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*

EDUCATION

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

  Keyword: *Reinforcement Learning, Imitation learning, Decision Making, Probability, Bayesian Model*