

# Shervin Khazaeli

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## SUMMARY

**Senior Data Scientist** with extensive expertise in designing and implementing advanced machine learning solutions, driving over \$60M in cost savings. Proven leader of cross-functional teams, fostering innovation and mentoring emerging data scientists. Skilled at collaborating closely with stakeholders to ensure high-quality project delivery and achieving strategic objectives.

## EXPERIENCE

- Trinnex (CDM Smith)** Canada/USA  
*Senior Data Scientist (Full-time)* 2022 - Present
  - Analytics development:** Designed, implemented, and deployed end-to-end Machine Learning (ML)-based solutions, focusing on predicting material compositions of water service lines, identifying anomalies, and forecasting break occurrences. Established policies and procedures for AI system accountability and transparency. The products are being utilized by 65+ clients across the United States resulted in over \$60M in cost savings.
  - Leadership:** Led a cross-functional team of developers and data scientists in the creation of innovative web-based applications aimed at predicting water main breaks. Collaborated with cross-functional teams to address deployment related challenges and enhance the operational efficiency of ML solutions. Mentored data scientist for personal and career development.
  - Strategic innovation:** Fostered a collaborative environment with stakeholders to identify opportunities for the implementation of ML-driven solutions, contributing to the development of cutting-edge projects and ensures the delivery of high-quality products.
- Polytechnique Montréal** Canada  
*Research Assistant (Full-time)* 2018 - 2022
  - Analytics development:** Designed & implemented an autonomous anomaly detection framework for civil infrastructures. Improved and developed Bayesian dynamic linear models and coupled them with reinforcement learning for anomaly detection
  - Leadership/Communication:** Periodic meetings and preparation of the reports for Ponts Jacques Cartier et Champlain incorporée. Mentored graduate and undergraduate students towards their academic and career paths.
- Smart City X** Canada  
*President & Co-founder* 2017 - Present
  - AI governance:** Developing AI governance frameworks to ensure ethical and compliant use of AI technologies.
  - Smart Systems:** Designed and led events enhancing the application of the smart systems and sensors for monitoring of infrastructures, water resources, and public health.
- Sensequake Inc.** Canada  
*Consultant (Part-time, Contractual)* 2016 - 2017
  - Analytics development:** 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; preparing comprehensive assessment reports for the clients.
  - Process automation:** Automated various data acquisition and analysis procedures.
- Concordia University** Canada  
*Research Assistant (Full-time)* 2014 - 2017
  - Cloud Architecture development:** Designed & implemented cloud-based solution for structural health monitoring using AWS.
  - Framework development:** Developed framework for damage detection and identification using data-driven models.
  - Instructor:** Designed & offered the course "Probabilistic Graphical Modeling" to build causality models in various disciplines.
- Udemy Inc.** Remote  
*Instructor*
  - Presentation Design MasterClass | LaTeX:** Designed & offered the course to mastery the art of the presentation using LaTeX.

## EDUCATION

- Polytechnique Montréal** Canada  
*PhD- Civil Engineering (Artificial Intelligence)*  
**Keyword:** Reinforcement Learning, Imitation learning, Decision Making, Probability, Bayesian Model