Evan Harley

Full Stack Data Scientist

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Professional Summary

A senior Data Scientist with full-stack capabilities and a proven track record of strategic leadership. My experience spans from authoring ministry-level AI strategy and leading data literacy initiatives to hands-on development of ML models and deployment pipelines. I am passionate about using technology to solve meaningful problems, am adept at turning complex data into clear, actionable insights that drive policy and improve public services, and I am eager to apply this blend of strategic and technical expertise to solve the next generation of complex data challenges.

Technical Skills

Programming & Databases

Languages: Python, R, SQL, JavaScript
Databases: PostgreSQL, SQL Server, Oracle, MongoDB, DuckDB, Vector Stores, Time-series Databases

Data Science & Machine Learning

Core Libraries: Pandas, NumPy, Scikit-learn, TensorFlow
Specializations: Natural Language Processing (NLP), Computer Vision (CV), Time-Series Forecasting, Anomaly Detection

Web, Deployment & MLOps

Frameworks: Svelte, Streamlit
Deployment & CI/CD: Docker, Kubernetes, GitHub Actions, APIs

Visualization & Reporting

BI Tools: Power BI
Libraries: Plotly, Matplotlib

Professional Experience

Full Stack Data Scientist *Ministry of Transportation (MOTT)* **Feb 2024 - Present**
Victoria, BC

- Authored the ministry's foundational AI Strategy Roadmap and led the subsequent adoption of emerging AI tools, providing a multi-year vision for integrating artificial intelligence into core business functions.
- Developed the comprehensive Data Analytics component of the Ministry's Data Strategy and spearheaded key initiatives to improve data quality, reporting, and overall analytical maturity.
- Championed data literacy across the organization by developing and disseminating training materials, upskilling staff and fostering a more data-informed culture.

Data Scientist *Ministry of Post-Secondary Education and Future Skills* **Jun 2023 - Feb 2024**
Victoria, BC

- Spearheaded the development of an NLP-driven project to map job descriptions to educational programs, creating prototype models and performing the foundational analysis to identify skill gaps in the provincial workforce.
- Championed data literacy across the ministry by mentoring policy teams on analytical thinking, enabling them to establish meaningful, data-driven Key Performance Indicators (KPIs).

- Collaborated directly with policy experts to define and implement a robust framework for measuring the effectiveness and impact of new educational initiatives.

Data Scientist *Ministry of Transportation and Infrastructure (MOTI)* **Jan 2021 - Jun 2024**
Victoria, BC

- Architected and executed large-scale data analysis on datasets exceeding 200 million rows, uncovering key trends that directly informed and resulted in provincial policy changes.
- Researched and developed advanced proof-of-concept models, including autoencoders for anomaly detection and various models to forecast demand in the transportation sector.
- Conducted comprehensive literature reviews on State-of-the-Art (SOTA) forecasting methods, presenting findings to stakeholders to guide the organization's technical strategy.

Information Systems Analyst *BC Public Service* **Jan 2018 - Jan 2021**
Victoria, BC

- Served as Lead Developer on critical software projects, successfully delivering robust applications to meet key business needs.
- Designed and coordinated a large-scale data cleansing initiative, significantly improving data quality and enabling more reliable downstream analysis and reporting.
- Developed and demonstrated innovative proofs-of-concept using Computer Vision and Natural Language Processing to showcase potential solutions for automating complex manual processes.

Data Research Assistant *Guilford Institute* **Jun 2016 - Jan 2018**
Greensboro, NC

- Analyzed the US National Institute of Health (NIH) Cancer SEER dataset using MongoDB, Python, and R to identify key factors influencing patient outcomes.
- Applied a variety of machine learning methodologies to build predictive models, successfully determining the most significant predictors of patient prognosis from complex clinical data.
- Performed extensive literature reviews to support ongoing research, ensuring the team's methods were aligned with the latest advancements in the field.

Volunteer Leadership & Community

Head of Information Technology (Volunteer) *Society for Creative Anachronism (SCA)* **Present**

- Lead and manage a diverse team of 10+ technology professionals, including Web Developers, Office 365 Administrators, and Server Infrastructure specialists, to support the organization's digital presence.
- Direct multiple high-impact projects, including the development of an online course platform and the strategic refactoring of regional websites to improve user experience and integration.
- Developed a full-stack application for tracking legacy course information, implementing both the back-end API and the front-end user interface.
- Design and teach courses on a wide variety of subjects, including pre-17th Century Japanese history, culture, martial arts, and research methodologies.

Education

Graduate Certificate in Data Analytics *Athabasca University* **2024**
MSc in Information Systems *Athabasca University* **Current Student**
Data Analyst Nanodegree *Udacity* **2016**