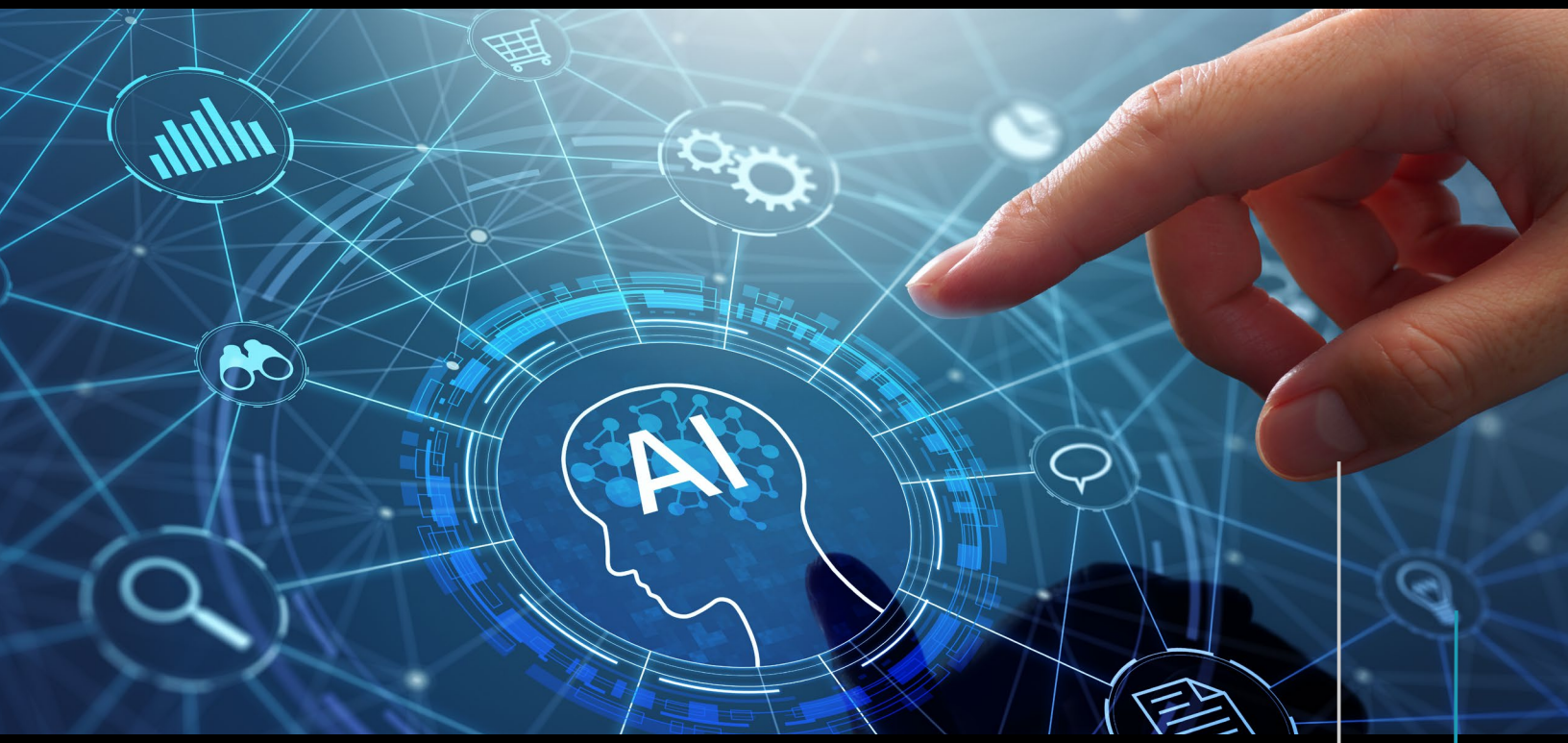
GovLab AI

Powered by AltaML

2024–2025



Impact Report

Table of Contents

Igniting

Public Sector Innovation

The AI Lab for Government (GovLab) is an innovation hub co-founded by AltaML, the Government of Alberta, and Mitacs to support public sector transformation. By leveraging public sector data, GovLab empowers government organizations to enhance operations through collaboration with the private sector, skill development, and the creation of AI-driven solutions. Bringing together experts from AltaML, government personnel, post-secondary students, and recent graduates, GovLab addresses real-world challenges. Its mission is to unlock the potential of data to improve public services and positively impact the lives of citizens.

A Message from **GovLab** Leadership

Chantal Ritcey

Public Sector Industry Lead, AltaML

I am proud to share our third GovLab Impact Report, high-lighting another year of growth, collaboration, and innovation. Over the past year, we have strengthened our focus on business-driven solutions, expanded our partnerships, and uncovered new opportunities to scale our impact.

A key milestone was hosting our first cross-industry Innovation Showcase, which brought together participants from across three locations in Edmonton, Calgary, and Toronto. This event underscored our commitment to knowledge sharing and thought leadership, fostering connections that will drive meaningful advancements in the years ahead.

As AI continues to play a critical role in addressing lagging productivity, our efforts remain focused on helping governments do more with less—enhancing service delivery for citizens without increasing costs. Through public-private partnerships, we see a significant opportunity to diversify our economy, support local business and create high-value jobs, all while ensuring that the intellectual property developed through GovLab remains within our borders.

With a strong foundation in place, we look forward to another year of progress, new opportunities, and continued collaboration as we continue to push the boundaries of what's possible.

Jodi Goebel

Health Industry Lead, AltaML

AI presents an enormous opportunity to enhance health system value and improve patient outcomes across the country. With the health system facing urgent challenges—ranging from administrative burdens to workforce shortages—there is a pressing need for innovative solutions. While rich health data exists, meeting heightened expectations for safe, effective, and equitable AI adoption requires a trusted partner.

The partnership between Cancer Care Alberta and AltaML combines in-house clinical and epidemiological expertise with AI specialization to develop solutions neither team could achieve alone. In less than a year, this collaboration has built models using de-identified patient data to better understand patient complexity and workload—directly addressing rising cancer wait times. As rapidly emerging treatments extend and complicate individual patient journeys, these AI-driven insights support a more efficient, responsive health system. And this is just the beginning.

This work demonstrates that, with the right partnership model, Alberta can tackle healthcare challenges at the pace of industry, creating a smarter, more resilient system for the future.

2024–2025

Associates

Corey Reeves

Resident, GovLab

Corey Reeves, Acting Director of Health Workforce Data and Analytics for the Government of Alberta, was a GovLab Resident in summer 2024.

At GovLab, Corey contributed to the Department of Health's Acute Care Workforce Planning initiative, focusing on forecasting key indicators crucial for nursing workforce planning. This work transformed his perspective on data. Over four months, he came to view data not just as numbers but as stories—stories that drive innovation, empower decision-makers, and improve lives. This narrative-driven approach now defines his work in health workforce analytics.

> "GovLab's emphasis on leveraging data for public good, fostering multi-sector collaboration, and employing evidence-based decision-making aligns closely with the responsibilities of health workforce data analytics," Corey said.

The experience equipped him with new skills he considers foundational to his role. "One standout aspect was the opportunity to collaborate with a diverse group of individuals who brought different perspectives, skills, and experiences to the table," he explained. "It wasn't just about problem-solving; it was about building something meaningful together."

Corey emphasized that GovLab's focus on collaborative problem-solving and data governance reinforced his commitment to reduce bias and ensure inclusivity in health workforce planning—a commitment he carries forward in his role.

Sevi Zhou

Business Solutions Consultant, GovLab

Sevi Zhou returned to GovLab twice as a Business Solutions Consultant (BSC), motivated by the opportunity to contribute to meaningful, purpose-driven work.

"In the public sector, the true impact is how we use data to address public issues and benefit citizens," Sevi said.

Sevi contributed to several Tenant projects, including those with the Government of Alberta, the City of Calgary, and the City of Edmonton. During this time, she refined her ability to manage competing priorities, coordinate tasks, and achieve delivery goals.

> "Attending client meetings was particularly valuable," she shared. "I learned how to effectively communicate technical details, manage expectations, foster collaborative relationships, and build my confidence."

These skills continue to serve Sevi well in her current role at the United Nations (UN), where she has taken on larger responsibilities and strives to lead with clarity and purpose.

"Creating tangible impact through GovLab gave me a sense of purpose and made me feel like the work I was doing truly mattered. That's a critical reason why, after graduation, I chose to join the UN and continue my journey in the public sector."

Grace Heemeryck

Associate, GovLab

Grace Heemeryck, a two-time Associate at GovLab, is now a full-time Machine Learning Developer at Alberta Health Services.

After spending eight months in the program, Grace described it as a rewarding experience, specifically because of the impact the Alberta Health Services Cancer Care workload prediction project could have on those around her. This drove her to continually push herself to show up and do her best.

> "The team encouraged me to take on important tasks in the project pipeline and participate in code reviews. Once I got onboarded onto the project, I never felt that the work I could do was restricted by my role as an Associate," Grace explained.

Grace has always been interested in health and data science, and gaining practical experience on a health project helped reaffirm her passion for the field.

> "GovLab introduced me to the connections I needed to secure a permanent role with Alberta Health Services to continue growing my career. The company as a whole contributed to an excellent environment to work in."

Use Cases

Alberta Health Services

Cancer Care

Cancer Care Alberta partnered with GovLab to leverage new machine learning tools and technologies as part of their ongoing efforts to proactively enhance patient care, reduce wait times, and optimize operational efficiency.

Close collaboration between machine learning industry experts, epidemiology and statistics researchers, and a multidisciplinary team of practicing clinicians and operations leaders facilitated the successful processing of 14 years of Cancer Care Alberta data from 18 distinct sources, encompassing patient census information, disease and tumour properties, treatment details, lab results, imaging metadata, patient-reported outcomes, and healthcare utilization information.

Initial patient risk groupings have been developed using the consolidated dataset, with future work to focus on workload predictions. The work to date proves the value of a strong foundation for machine learning models and future AI-driven and data science initiatives. The insights driven from this work can lead to significant improvements in patient care, streamline operations, and enable future AI or data science initiatives.

The Alberta Cancer Foundation funded this project.

Alberta Health Services

ALBERTA CANCER FOUNDATION

Government of Alberta

Safety Codes Research Assistant

Responding to safety code inquiries from citizens, contractors, and stake-holders requires extensive research, often taking hours for Municipal Affairs Duty Officers to find the right information in large code books. This manual process delays responses and can impact community safety.

GovLab partnered with the Government of Alberta to develop the Safety Code Research Assistant, a generative AI-powered tool that streamlines this process. It allows Duty Officers to interact directly with PDF versions of the code books, ask questions, and receive accurate, referenced responses in minutes. The tool also cites relevant code sections and supports follow-up questions for comprehensive answers.

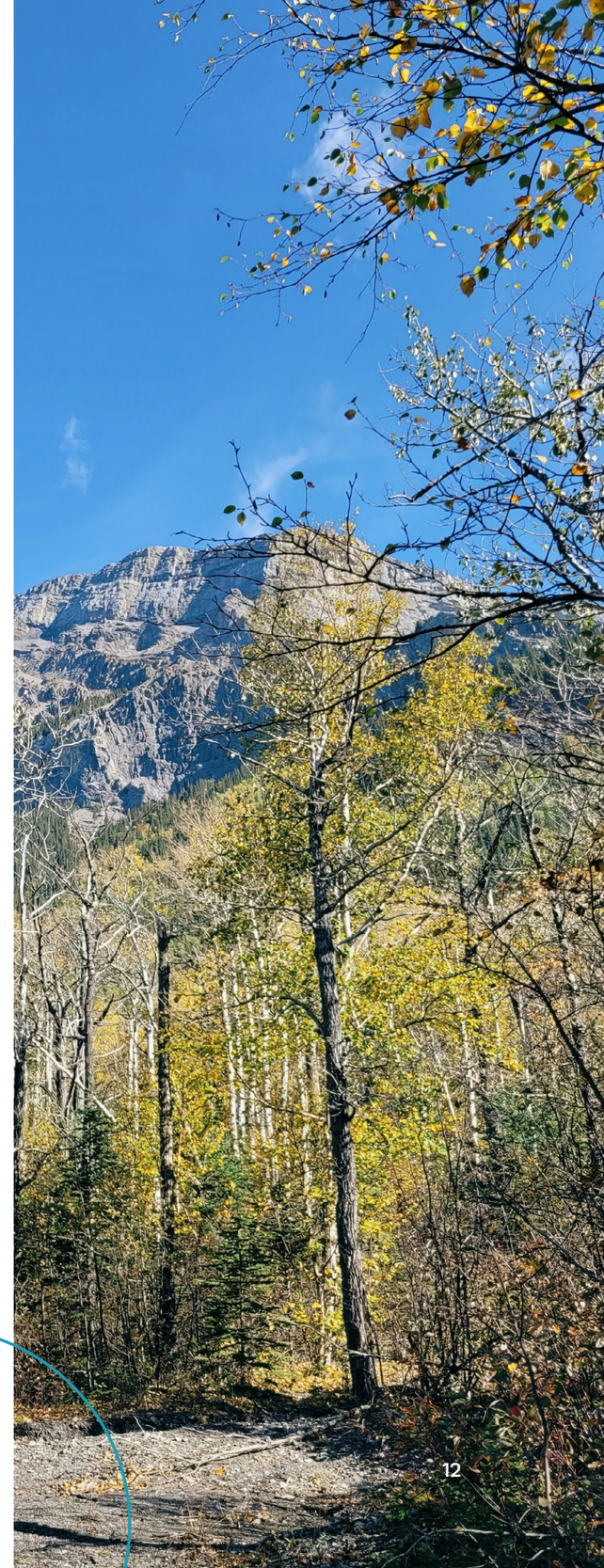
By cutting research and response times from hours to minutes, the tool reduces effort and increases efficiency, enabling faster, more effective support for safety code compliance across the province, improving service delivery and public safety.

Forestry Fuel Grid

Alberta's Fire Behaviour Prediction (FBP) Fuel Type grid is used as a basis for fire behaviour forecasting and modeling across the province at multiple scales and in different contexts. It is updated based on Alberta Vegetation Inventory (AVI) data, remotely sensed imagery, wildfire documentation, and informed assumptions from fire and/or forest management experts.

GovLab partnered with the Government of Alberta to leverage advanced hyperspectral satellite imagery from Alberta-born Wyvern Space. This data was used to train a machine learning model capable of classifying tree species and non-forested areas across diverse terrains, providing a more efficient and accurate method for updating the fuel grid.

The model successfully distinguished between fuel types, enabling a faster, more precise approach to wildfire risk assessment and strengthening data-driven decision-making.



City of Calgary

Pavement Conditions

Traditional road condition assessments are detailed but often labour-intensive, costly, and slow due to processing delays. The City of Calgary sought a rapid, inexpensive, and automated screening tool to identify and classify road distresses, such as potholes, cracks, and deformations.

AltaML partnered with the City of Calgary to experiment with an AI-powered solution that automates road condition assessments. The City collected street-level video, and the system would use computer vision to detect some individual pavement distresses, summarizing road conditions in reports with distress types and GPS locations.

By replacing manual inspections with an automated tool, there's potential for the City to improve efficiency and reduce costs. While this represents a step toward data-driven infrastructure management, there's still the opportunity for further refinement and expansion.

GovLab Stats

Innovation and Outcomes

Since 2022

Interns Hired — 81

Returning Associates

12
Have been hired in FTE roles at AltaML

26
Associates have done multiple terms with GovLab or did 1 term in GovLab and returned to AltaML for another internship term somewhere else within the organization

Total Applications

6177
Associate ML Devs

1338
Associate BSC

Projects Completed — 23

Minimum Viable Products

6
Solutions delivered

Impact Statements

Dr. Paula Robson

Scientific Director, Alberta Health Services

Cancer Care Alberta is committed to optimizing care for those diagnosed with cancer across the province. As part of this effort, we are leveraging data in new ways through our partnership with GovLab. Our first project aims to predict workload and workforce needs, addressing the growing number of cancer diagnoses and evolving treatments that extend patient lives.

Our GovLab tenancy has rapidly upskilled our team and accelerated progress beyond what we could have achieved alone. It has been a stellar experience. Our epidemiologists and biostatisticians have worked closely with AltaML's experts to consolidate data from approximately 14 million cancer centre visits over 14 years. This partnership has strengthened our expertise in machine learning and data science while ensuring strict data privacy.

We have demonstrated that health system data can be used innovatively and ethically to shape the future of healthcare. This is just the beginning, and we look forward to more projects that will benefit the people of Alberta.

Dr. Stephen Lucas

CEO, Mitacs

Since its inception, AltaML's GovLab has empowered talent to make meaningful contributions in the key areas of artificial intelligence and data science. It is our third year collaborating with this innovation hub and we have the privilege to witness firsthand the positive impacts of investing in emerging talent through training and hands-on opportunities as a means to boost productivity, skills development, and retention in critical sectors. This initiative holds immense potential to shape the future, not just in Alberta, but across Canada. Mitacs is proud to contribute to Alberta's growth and success through our partnership with an innovation leader like GovLab.

Now is the Time to Lead

Connect with AltaML to learn more about how to transform your business area responsibly and at speed to shape the next chapter of public sector innovation.

govlab@altaml.com

govlab.ai