

# Diego Ripley

**Location:** Ontario, CAN

**Authorization:** CAN Citizen, Secret Clearance

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## SUMMARY

Technical Leader with 13+ years of experience working at the intersection of software engineering, data infrastructure, and geospatial technologies to create a meaningful impact through code. Collaborative Engineer with a user-centric approach focused on working with mission-driven organizations and leveraging the latest technologies to translate objectives into software solutions.

## SKILLS

- **Engineering:** Distributed Systems Architecture, Data Infrastructure Design, Geospatial Solutions, Rapid Prototyping, ETL Development, API Integration, Performance, Optimization, DevOps, CI/CD, Automation, Testing, Data Quality
- **Technologies:** Python, SQL, SAS, Bash, AWS, Linux, Ubuntu, RHEL, Arch, Docker, Ansible, Terraform, Packer, Concourse, GitHub Actions, GeoParquet, GeoZarr, COG, PMTiles, PostGIS, GeoServer, OGC services/APIs
- **Leadership:** Innovation, User Empathy, Technical Project Management, Process Improvement, Change Management, Cross-functional Collaboration, Stakeholder Engagement, Coaching & Technical Mentorship, Documentation

## RELEVANT EXPERIENCE

### **Founder, Data for Canada**

**May 2025 – Current**

- Established a digital preservation organization to curate, clean, and securely share high-value statistical, foundational, orthoimagery, and field imagery data from across Canada into modern file formats to power next-generation ML models.
- Championed a user-centric approach, connecting with non-profit organizations and community members to gather user requirements, identify pain points, and translate those needs into short-term improvements and a long-term roadmap.
- Created a modern data stewardship process and improved the user experience by decoupling datasets from unstable sources to ensure 24/7 data access and long-term availability for researchers, developers, and data engineers.
- Defined and executed the infrastructure roadmap, developed a data distribution strategy, created the data catalog, and built ETL pipelines to rapidly process 13 TBs of data and provide metadata in multiple languages.
- Completely transformed a 6-step process downloading 26GB into 1 SQL query on 132 MB in 2.89 seconds.

### **Developer, Bank of Canada**

**May 2022 – May 2025**

- Led the end-to-end deployment of Posit Workbench, Connect, and Package Manager on hardened RHEL Docker infrastructure in a deny-by-default, containerized environment.
- Owned the integration of Sonatype Nexus Repository for Python, R, and Julia, and configuration of JupyterLab and VS Code.
- Automated the process and delivered technical recommendations to improve efficiency and upgrade container images.

### **Data Engineer, Statistics Canada**

**November 2018 – June 2021**

- Architected, optimized, and modernized spatial data infrastructure using Python, SQL, and Bash for the national statistical office to ensure Canadians have key information on Canada's economy, society, and environment.
- Led data engineering for the Enterprise Statistical Geospatial Framework cloud experiment by setting up GIS software on a secure VM with minimal resources and containerizing applications as Docker images.

### **Data Production Officer, Statistics Canada**

**November 2013 – November 2018**

- Prototyped the Civic Address to Dwelling ID algorithm and app to find and contact the resident regarding census forms.
- Defined and executed the strategy and spatial geocoding process for address record linkage and register matching.
- Delivered the 2016 Census Geography basemap 85.71% faster than expected by downloading 20+ geospatial and tabular datasets, running operations, creating rules to display data, and implementing automation in Python and SQL.
- Ensured data validity by developing a flexible test suite to extract and check test cases against StatCan web applications.

### **Developer Co-op, NAV CANADA**

**January 2012 – August 2012**

- Led the acquisition of vector and raster geospatial datasets, the creation of a web mapping basemap on Amazon EC2, and the automation of weather and aeronautical data processing in Python for NAV CANADA's internet flight planning system.
- Prototyped and presented a web GIS mockup application to view and analyze weather data information in real-time.

## EDUCATION

- Hnrs. Bachelor of Environmental Studies in Geography and Environmental Management-Geomatics, University of Waterloo