UNIVERSITY OF
WATERLOO

Job Title:	Data Steward
Department:	Polar Data Catalogue/Canadian Cryospheric Information Network
Reports To:	Director, Climate and Environment Information Systems, Interdisciplinary Centre on Climate Change
Jobs Reporting:	Co-Op Students
Salary Grade:	USG 7
Effective Date:	March 2021

Primary Purpose

The Data Steward archives and makes available in the Polar Data Catalogue (PDC) data produced by scientists from various research and monitoring programs in Canada and abroad, along with accompanying metadata and statistics. The Data Steward maintains the integrity of metadata and data collections within the PDC and provides reporting and metrics to support PDC activities and goals. The Data Steward supports harvest and export activities and requirements, and is involved with standards and interoperability initiatives. The Data Steward engages with data contributors, users, partner programs, and the public, to broaden understanding of the requirements and importance of effective data stewardship for science and society.

Key Accountabilities

Intake & Curation
- Guide and assist researchers and students in preparation and submission of new metadata records and data files to the PDC
- Review submitted metadata and data files and work with contributors to ensure compliance with established guidelines and standards
- Track submissions and ensure that all metadata and data are submitted as expected and report progress to partner programs
- Assign Digital Object Identifier (DOI) to publicly available datasets and track DOI assignment statistics

Standards & Interoperability
- Review and update existing metadata records to ensure information is current and conforms with evolving international standards
- Review and update the structure of deposited data files, when required
- Coordinate and provide metadata/data harvests and exports
- Participate in Canadian Consortium for Arctic Data Interoperability (CCADI) project work, as well as other related initiatives
- Monitor and maintain subject matter expertise on evolving standards and methodology related to metadata and data archival practices

Communication & Outreach
- Liaise with partner data coordinators and other data stewards in Canada and internationally
- Respond to requests from data contributors and users
- Respond to enquiries and comments from the public
- Participate in communications and meetings with partners and stakeholders, as well as presentations and events for broader audiences
- Create training materials and YouTube tutorials for users and partner programs

- Coordinate and provide messaging via online social networking accounts (i.e. Twitter, LinkedIn, Facebook)
- Advocate for best practices in data stewardship through outreach and education

Reporting & Metrics
- Report progress on metadata and data submissions to partner programs, when needed
- Compile metrics and write content required for formal reporting to partner programs and sponsors
- Compile metrics and write content required for funding proposals
- Compile metrics and write content required for publications, presentations, and other communications
- Support quantitative analyses and the creation of visualizations

*All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.

Required Qualifications

Education
- Bachelor's degree or extensive experience in data stewardship

Experience
- 2+ years of demonstrated experience in data stewardship, data management, or an equivalent background
- Experience operating an online submission intake system
- Experience with data quality assurance and the curation of electronic records and information
- Experience with data metrics, data analytics, and key performance indicators
- Experience with report generation and proposal writing
- Experience communicating and collaborating with researchers and research support personnel
- Experience communicating and collaborating with scientific and/or policy developers
- Demonstrated level of competence, discretion, and professionalism appropriate for interacting articulately and persuasively with a wide range of stakeholders
- Strong organizational skills coupled with the ability to handle multiple tasks and excel in a fast-paced environment with changing priorities
- Specialization in physical geography, geomatics, informatics, or data science would be beneficial

Knowledge/Skills/Abilities
- Strong understanding of metadata standards, particularly ISO 19115
- Strong understanding of SQL and the ability to query an object-relational database systems, such as PostgreSQL
- Familiarity with XML, JSON, APIs, metadata interoperability, metadata harvesting and exports, and the FAIR data principles
- Familiarity with data mining and statistical methods using statistical software, such as R
- Familiarity with issue tracking software, such as Jira
- Familiarity with common operating systems, including Windows and Linux
- Competence with general office software, including Word, Outlook, and Excel, as well as meeting apps, such as Teams and Zoom
- Excellent written and oral communication skills (French considered a strong asset)

Nature and Scope

- **Contacts:** Interacts with a broad spectrum of organizations, academic units, and stakeholders. Presents organizational overviews, collection metrics, and data management best practices. Acts as the primary liaison with partners and sponsors, and is the organizational point of contact for the public. Communicates with a wide range of audiences through institutional, local, national, and international events and correspondence.
- **Level of Responsibility:** Involves specialized tasks, both routine and ad hoc, with minimal supervision. Overall accountability for the integrity of metadata and data collections, as well as all project deliverables relating to data stewardship.
- **Decision-Making Authority:** Makes decisions about the acceptability of metadata and data submissions to the PDC, including what feedback and recommendations should be provided to submitters.
- **Physical and Sensory Demands**: Minimal demands typical of a position operating within an office environment; strain resulting from extended periods of sitting, concentrated use of visual senses, repetitive motion, and prolonged close attention to detail. Some physical activity may be required to move or setup equipment. Ideally able to lift 30 lbs.
- **Working Environment:** Exposure to conditions typically associated with support-level responsibilities with short deadlines, changing priorities, and frequent interruptions and distractions; intermittent work outside the normal operating hours of the institution, and occasional travel.