

Data Curation Job Descriptions

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University of Michigan Library

POSITION DESCRIPTION

Job Description

The Research Data Curation Librarian will advance the library's mission to create and sustain data services for the campus that support the mission of the University of Michigan researchers through the library's Research Data Services (RDS) unit. A key focus of this position will be to contribute to the development of the data repository in collaboration with colleagues and stakeholders, in the library and across campus.

Date: 8/2015

Department: Science, Engineering, Clark Library and Research Data Services

Working Title: Research Data Curation Librarian

University Classification: <Librarian>

Position Summary:

The University of Michigan Library has embarked on an aggressive and exciting initiative to address research data management and curation needs at the University.

RDS is responsible for strategic planning, coordination, and deployment of research data services directed at facilitating the research lifecycle. This includes creating and implementing data management assistance for the campus, outreach to faculty in collaboration with librarian subject specialists, informationists, training, and assessment of RDS programs and services. RDS operates in 4 key areas: 1) Education, Awareness and Community Building, 2) Technical Infrastructure, 3) Policy and Strategy, and 4) Consultation and Services.

The responsibilities of the Research Data Curation Librarian will fall in all four of the above areas, with a particular focus on developing and maintaining the services offered through the research data repository in collaboration with colleagues and stakeholders, in the library and across campus.

Reporting Structure:

Reports to the Research Data Services Manager

Supervisory Experience:

This is a largely collaborative position that requires negotiation of relationships across the library

and the University. As such, it will require student supervision and deployment experience, but has no FTEs reporting to it.

Responsibilities (essential functions):

While partnering with colleagues at the U-M Office of Research, Information Technology Services, Advanced Research Computing, as well as academic programs, institutes, departments, and colleges across campus, the Research Data Curation Librarian will:

Work with researchers to curate and archive data (30%)

The Librarian will work with researchers to identify, recruit, ingest and deposit data in the library's digital repository, adhering to local policies, national and international standards and best practices. The incumbent will play a significant role in outreach to the research community to deposit data in both the digital repository or an appropriate subject repository, as well as creating training programs, help guides and web resources for Data Education and RDS for internal and external audiences. When necessary the Librarian will consult with researchers on their specific needs such as adopting metadata standards or data sensitivity characterization.

Create, support and sustain technical infrastructure (20%)

In collaboration with key partners, the incumbent will act as the point person for the data repository, investigate integrative infrastructures to connect campus needs to the repository, design and implement workflows, and execute technical processes involved in managing the lifecycle of digital datasets including data transformation projects.

Work with campus stakeholders on larger data collections issues (15%)

In addition to serving as a consultant to researchers and librarians on data issues and services, performs data management planning with principle investigators and researchers; assists in the development and delivery of training and instructional materials on data curation; provides guidance and instruction on discovery, acquisition and use of research data in the public domain.

Engage and participate in all aspects of the RDS and library services as appropriate (25%)

The Research Data Curation Librarian will participate in developing RDS within the Library and actively working to promote and advance the components of RDS amongst librarians. This includes the development of resources, documentation and instructional content about data curation, participating in selected cross-library working groups to create and improve services. Other duties as assigned.

Professional Development (10%)

Pursue research and professional development activities individually and as appropriate to the position. Engage with the library community and communities of practice beyond the library.

Required Qualifications:

- ALA-accredited Master's degree or an equivalent combination of a relevant advanced degree and experience
- Demonstrated knowledge of or direct experience managing and curating research data
- Knowledge of information technologies, standards and best practices prevalent in digital or data curation
- Ability to articulate roles in the research data ecosystem
- Knowledge of technologies for data management and curation, and familiarity with preservation principles and practices
- Ability to work independently and effectively with others as a team within a complex and fluid organization. Ability to work well in a multicultural and collaborative environment
- Possess excellent written and oral communication skills; ability to present and share ideas clearly and effectively to a diverse audience

Desired Qualifications

- Experience working with digital repository or content management systems
- Experience documenting workflows and procedures
- Knowledge of metadata formats, including Dublin Core, MODS, METS, and data exchange protocols such as SWORD and OAI-PMH.
- Experience in identifying researcher information needs and in creating effective services to meet those needs
- Demonstrated experience in the acquisition and management of born-digital or digitized library, archival, or research materials
- Demonstrated time management and project completion skills
- Demonstrated commitment to customer service

Digital Library Data Curation Developer

The Hesburgh Libraries is seeking a passionate software developer to join our Digital Library Technology Unit in support of digital library and research data curation services. With an emphasis on data curation, the individual will design and develop digital library frameworks and applications in areas such as controlled vocabularies, digital collections, digital content harvesting. Within science, engineering, and the social sciences, the individual will work with librarians, campus partners, and researchers to embed research data curation tools and workflows into active research projects for archiving and sharing data in our institutional repository CurateND (<http://curate.nd.edu>), or other relevant community repositories. This will involve combining data tool and architecture design with development of automated data extraction utilities and linked data technologies to apply domain specific metadata. The individual will also develop web based user clients for researchers to manage and browse research data. Additionally, the individual will contribute to our digital library frameworks and applications in areas such as controlled vocabularies, digital collections, digital content harvesting, and general support of digital library applications.

This position includes the opportunity to join us in a vibrant open source project called Hydra (<http://projecthydra.org>) in which we have partnered with several other universities and organizations to create advanced digital library applications and services.

Job duties include:

- Design and develop digital library applications supporting digital library and data curation services
- Provide technical leadership in data architecture and design for digital library data projects in collaboration with the Digital Library Technology Unit
- With campus partners, develop services and web clients to manage, archive, and share research data
- Create APIs and processes to integrate other campus systems with CurateND from groups like Engineering Science and Computing, Center for Research Computing, and Digital Production.
- Work with librarians and campus partners through our Center for Digital Scholarship to develop data models and tools to tag and describe data and collections with domain specific ontologies
- Provide software development support for research projects involving computational analysis or scientific data. This may involve manipulating or analyzing data with a statistical/computational package (e.g. R, SciPy, Matlab, Mathematica, STATA)
- Support digital humanities projects as needed with automated text analysis, topic modeling, and other methods

Minimum Qualifications

- Bachelors degree in Computer Science or related discipline, or equivalent software development work experience.
- At least 2 years experience working with at least one programming language (such as Python, Ruby on Rails, C, C++, Java, Python).
- At least 2 years experience creating relational databases using Oracle, MySQL, Postgres, or other modern RDBMS.
- Experience developing web based user interfaces and/or applications

- Experience designing and implementing APIs or middleware related services
- Excellent personal skills in order to work closely with customers throughout the research lifecycle

Preferred Qualifications

- Experience developing against digital repository systems such as Hydra, Islandora, Fedora Commons, or DSpace
- Experience with search indexes such as Solr, Lucene, and ElasticSearch
- Experience with research ontologies, RDF, or other linked data technologies
- Experience developing search, browse, or other visualization interfaces for research data
- Experience with computational and statistical packages such as R, Matlab, SPSS, SAS, and STATA.
- Applied research experience as either a member or in support of a science or engineering research project involving data computation or analysis
- Experience with digital humanities computational techniques such as text mining, or topic modeling