Digital Information Research Specialist (Business Systems Analyst 3)
Office of Digital Assets and Infrastructure (http://odai.research.yale.edu/)
Yale University

Online Posting and Application site: http://www.yale.edu/hronline/stars/application/external/index.html

General Purpose

Yale's Office of Digital Assets and Infrastructure (ODAI) is seeking a highly motivated digital information expert to pursue innovative approaches to challenging issues in the discovery of diverse digital assets, in interoperability across disparate collections, in enhancement of collaborative scholarly environments, and in development of effective digital publishing platforms.

ODAI has undertaken an initiative to jointly define and build essential research-based and domain-informed components of a coherent technical infrastructure and a comprehensive policy layer for research support. This program is strategically aligned with other digital infrastructure initiatives in ODAI including the development of digital preservation services with a secure storage environment.

The Digital Information Research Specialist will play an important role in shaping ODAI's involvement in this development of campus-wide support for e-science, digital data curation, and cyberscholarship for all disciplines. Reporting to the ODAI Director, he or she will work closely with the ODAI Information Architect and Digital Information Strategic Analysts.

Essential Duties

1. Work at the intersection of digital data, technology and metadata, and will be responsible for consultation, assessment and articulating requirements to facilitate all aspects of digital data curation and cross collection discovery. To be successful, communication, outreach and close collaboration will be essential in working with units across campus, including faculty, libraries, museums and galleries, information technologists, the ODAI task forces and researchers across the many disciplines engaged in digital data management.

2. Conduct advanced research in and articulate potential implementation strategies related to scientific research trends, data documentation tools, topic modeling, schema and ontology development and standards important for data exchange, reuse and interoperability. Evaluate and apply various information technology tools for metadata manipulation and script execution.

Examples of potential activity related to the following ODAI projects and task forces:

ODAI Research Data Task Force:
Research and produce domain specific research data requirements profiles for the assessment of need and the development of business plans and solutions for a wide range of activities related to the management and preservation of Yale's digital research outputs for current and future generations of users. Work closely with the development of Yale's Research Data Repository and Digital Preservation Program.

ODAI Cross Collection Discovery Task Force:
Support the design and implementation of an OAI-PMH and OAI-ORE infrastructure for the discovery of collections that are physically dispersed and the exchange of digital assets and metadata. Develop and implement policies and workflows to insure interoperability of digital assets and metadata and implement Web services to support operation of the infrastructure.

3. Develop collaborative grant funded projects that could, for example:
   - include a Web 2.0 component that will enable researchers to interact with resources and with each other;
   - develop resource annotation tools that enable intelligent search and data mining of deeply annotated resources;
   - develop the capability to automate the deep annotation of resources based on existing metadata;
   - address the problems of storing, using, and sharing massive quantities of scientific data that are increasingly critical to research progress.

Education and Experience

1. Master's in Library or Information Science, or Master's Degree in Science.

Additional Education and Experience

1. Four years of professional experience in an academic environment.
2. Demonstrated understanding of and experience with the concepts and standards necessary for building large collections of digital assets.
3. Demonstrated record of success in bringing projects to completion.
4. Successful track record in writing and obtaining grants and in management of grant-funded projects.
5. Preferred: Knowledge of computational tools and techniques for data mining, management, and manipulation; aptitude for learning digital collection management, electronic resource management, and metadata standards and formats; expertise in one or more of the following metadata standards: Ecological Metadata Language (EML), Data Documentation Initiative (DDI), FGDC Biological Data Profile, Metadata Encoding and Transmission Standard (METS), Metadata Object Description Schema (MODS), and Text Encoding Initiative (TEI); familiarity with commonly used repository platforms (e.g. Fedora, DSpace, ePrints) and data harvesting protocols such as OAI; ability to use various tools for metadata manipulation and scripting; experience with relational database design, XML/XSLT, Java, Perl, Python, or PHP; familiarity with Semantic Web specifications and experience in XML DTD and W3C schema creation.

Skills & Abilities

1. Ability to analyze and to solve problems creatively and flexibly in a complex and rapidly changing environment.
2. Ability to work well in a collaborative team-based setting.
3. Ability to conduct original research and develop logical, persuasive arguments.
4. Strong communication (oral and written), interpersonal, and presentation skills.
5. Aptitude for and consistency in detailed work.
6. Strong service orientation and interest in information users' values and needs.
7. Self-motivated and ability to multi-task.
8. Fast learner with a strong desire and motivation to master the intricacies of digital infrastructure in the higher education environment.