Jane Frazier

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Experience

SEEK / Ontology Operations Lead
NOV 2016 - PRESENT, Melbourne, Australia

I was part of the founding Ontology team at SEEK and now run operations for the seven member ontology practice. I drive all of the controlled vocabulary and ontology design and usage across the business and collaborate with our data science practice to provide quality structured, enriched and linked data and services to facilitate matching and recommendation within the employment market.

Ontology practice leadership

- Teach and evangelise best-practice ontology design and usage throughout SEEK
- Mentor team members ranging from data curator to senior ontologist
- Work with the Artificial Intelligence Platform Services leadership, developing materials for and reporting on our team's progress against quarterly objectives and key results
- Articulate risk benefit analysis and alignment between operational- and strategic-level plans
- Develop data analysis tasks and evaluating presentations by potential candidates during our hiring processes

Ontology and ontology web services development and management

- Model strategic new data assets from inception through to curation
- Coordinate and standardize schemas, naming conventions and team curation workflows for 10 data assets
- Oversight of schemas and curation workflows with nightly automated data extraction processes
- Design and drive implementation of web services that make use of data assets for content enrichment, normalisation and auto-suggestion
- Requirements analysis and gathering for consumers and stakeholders across the business (product and data science teams)
- Liaise with the technical support team for PoolParty, our ontology management tool, from notification of system bugs to requests for improvements

Establishing machine-learning approaches to ontology and service management

- Designed and drove the implementation of an algorithm-based feedback loop service for ontology improvement at scale that resulted in the automated introduction of hundreds of previously unknown and highly relevant terms into SEEK's ontology and the marked improvement of a normalisation service used across the business
- Collaborated with a data scientist to design and implement the first semi-automated data curation process at SEEK

Initiative to train an automated annotation algorithm

- Developed guidelines for manual named entity recognition tagging of a sample of raw user-provided data using five predefined entities
- Co-coordinated the annotation of 5,000 raw user-provided values by six members of the team, ensuring consistency and adherence to annotation guidelines using the Prodigy annotation tool

Gold standard data development and implementation

- Led construction of a gold set of 2,000 ideally annotated raw data values for the purposes of measuring the quality of a normalisation web service

SEEK / Structured Data Business Analyst

MAY 2016 - NOV 2016, Melbourne, Australia

Spearheaded the adoption of Linked Data standards to transform the model of curating, managing and sharing structured data and vocabularies at SEEK from a siloed and unsystematic approach with no version control into a standardised, versioned, centralised approach.

- Articulated the benefits of a graph-based approach to structured data and ontology, gaining buy-in from upper management and stakeholders from across the business
- Analysed legacy formats, workflows and processes of SEEK's structured data assets and vocabularies to understand requirements and inform the new model
- Developed, implemented and documented models for structuring, maintaining and sharing assets and vocabularies using ontology management software
- Configured and imported data to a proof-of-concept instance of the proposed ontology management tool to demonstrate its viability for data curation and interoperability with SEEK technical infrastructure

Australian National Data Service (ANDS) / Data Librarian

AUG 2014 - MAY 2016, Melbourne, Australia

Enabled and supported Australian researchers by facilitating the description, preservation, publication, dissemination, discovery and reuse of their research data. I provided specialist knowledge and support for internal ANDS projects and for institutional partners to advance their research data management activities, including the following activities:

Chair, ANDS Metadata Advisory Group

- Metadata capture and maintenance best practice training, advice and support for research data managers from government agencies and universities across Australia

Member, ANDS Business Solutions Working Group

- Solution design for issues related to ANDS digital services and applications
- Developed metadata schema change proposals for the RIF-CS Advisory Board

Institutional partner data and metadata consultancy: Australian National University

- Research data management guidance and support
- Support for data interoperability between ANDS systems and ANU systems via consultancy, metadata mapping and XSL transformations

ANDS Vocabulary Service

- My team built and launched the world's first national service for the management, storage, publication and sharing of controlled vocabularies for use in research which now enables the management and reuse of over 200 controlled vocabularies by over 50 publishers
- Requirements gathering and synthesis and consensus across five stakeholder institutions
- Environmental scan and selection of thesaurus software
- System and business analysis resulting in metadata schema design and implementation
- UI design and mockup work
- Wrote and published user support documentation
- Created and coordinated tasks and user stories for engineering
- Provided training for partners to facilitate uptake and use of the tool

Co-organiser, *23 [Research Data] Things* international program, 2016

- Creation and administration of collaborative Meetup space for over 50 participants

- Design and awarding of 30+ Credly digital badges for participation

Visiting researcher, CSIRO Summer of Vocabularies, 2015

- Developed reusable guidelines for transforming non-machine-friendly controlled vocabularies

Stanley Gibbons / Product Manager, Data
MAR 2014 - JUN 2014, Raleigh-Durham, North Carolina, USA

Worked in an Agile environment to lead a team of three engineers and a designer in building applications to facilitate users inside and outside the organisation to find information about collectibles. We worked to develop the management and retrieval of collectibles data, including the following initiatives:

- Developed the search and browse experience of a new collectibles marketplace, including faceted navigation, search engine optimisation, and microdata
- Integration of a newly constructed master data management system to an inventory management system (Magento) and to internal legacy products
- Developed a bulk uploader to import multiple formats of legacy data into a new master data management system, including complex business logic and error handling
- Constructed and performed external user surveys to inform the developing architecture of the new collectibles marketplace
- Developed mappings between technical philatelic terminology used by internal stamp experts in the master data management system and novice philatelic terminology used by collectibles marketplace users

Stanley Gibbons / Associate Product Manager
MAY 2013 - FEB 2014, Raleigh-Durham, North Carolina, USA

Worked in an Agile environment with a team of nine engineers and designers over a nine-month period to build a master data management system for postage stamps and other collectible items which was used to power an online collectibles marketplace. I established a strong relationship with an international group of users to plan and build new infrastructure and systems to support the description of collectibles, the creation of print publications, and the management of catalogue data for the entire company. I led the following initiatives:

- Contextual inquiry and business analysis which informed the product's architecture and metadata schema
- Taxonomy development and documentation for internal user base which was used to construct data entry workflows
- Data mapping and migration from unstructured data in a legacy system to a structured format
- Provided educational sessions in data capture and data description best practices for users and the development team
- UI design and mockup work
- Business acceptance criteria development and testing

UNC-Chapel Hill Metadata Research Center / Research Assistant
2011 - 2013, Chapel Hill, North Carolina, USA

Collaborated on research projects funded by the National Science Foundation and the Institute of Museum and Library Sciences. Participated in a research project in which our team developed a 'gold standard' data asset for the evaluation of an automatic subject indexing tool called HIVE (Helping Interdisciplinary Vocabulary Engineering) that leveraged the Kea++ and Maui algorithms. In this study, I evaluated, using a conceptual mapping scoring system, the semantic and syntactic similarity between user-generated tags and terms from three scientific controlled vocabularies which had been automatically identified by HIVE to describe data in Dryad. This research facilitated the evaluation of automatic subject indexing processes at Dryad.

Dryad Digital Repository / Curatorial Assistant

2011 - 2013, Durham, North Carolina, USA

Worked in a digital data repository context managing scientific datasets which underlie peer-reviewed publications in the biosciences. Evaluated items for accuracy and completeness in order to determine their inclusion in or rejection from the repository. Created item metadata, DOIs, and citations, communicated with data content creators and Dryad colleagues in order to facilitate archiving, accessibility, and preservation. Handled Creative Commons licenses, GNU General Public Licenses and human subject data anonymity issues. I performed research on user-provided subject description, and presented these findings to the lead Dryad curator. My work allowed Dryad scientists to use metadata best practices to describe their data in ways that made their data highly visible to other researchers.

United States Library of Congress / Policy and Standards Division Intern

2012 - 2013, Washington, D.C., USA

Participated in the development and production of the Library of Congress Medium of Performance Thesaurus (LCMPT) and companion Data Authority Elements. This thesaurus is used by Library of Congress cataloguers to more thoroughly describe items in its music collection. After successful completion of the internship, I was appointed to the Music Library Association Bibliographic Control Subject Access Subcommittee.

Education

University of North Carolina at Chapel Hill / Master of Information Science

2011 - 2013, Chapel Hill, North Carolina, USA

University of Michigan / Master of Music, Voice and Opera

2007 - 2009, Ann Arbor, Michigan, USA

University of North Carolina at Greensboro / Bachelor of Music, Voice and Opera

2007 - 2009, Ann Arbor, Michigan, USA

Skills/Tools

PoolParty Semantic Suite, MultiTes Pro Thesaurus Publishing Workstation, Simple Knowledge Organisation System (SKOS), RDF, Data mapping & crosswalking, Taxonomies & ontologies, Contextual inquiry, User surveys, Wireframe modelling, ER modelling, Google Apps, Atlassian Suite, Office Suite, Git, Neo4j, Balsamiq, Trello, Wordpress, Qualtrics, OpenRefine, HTML, XML, UML, International Phonetic Alphabet (IPA)

Presentations/ Participation

FAST Program for High-Achieving Females at SEEK 2019 (invited member)

VALA Tech Camp 2017, Melbourne (invited speaker)

VALA Conference 2016, Melbourne (presenter)

Research Data Alliance Conference 2016, Tokyo (presenter)

CSIRO Computation, Simulation Science & eResearch Conference 2016, Melbourne (presenter)

eResearch Australasia Conference 2015, Brisbane (presenter)

Linked Open Data in Libraries Archives and Museums Summit 2015, Sydney (delegate)

Research Bazaar (Python stream) 2015, University of Melbourne (delegate)

Monash University Business Analytics Research Team meeting 2015 (invited speaker)

ANDS *Flying Solo: Librarians outside of traditional roles* **Webinar 2015** (invited speaker)

OCLC *Academy Meets the Real World* **Summit 2012**, Dublin, Ohio (invited delegate)

UNC-CH Metadata Research Center *Metadata Marathon* **Summit 2011** (delegate)

Affiliations

Research Data Alliance - Vocabulary & Semantic Services Interest Group, 2016-present

Dublin Core Metadata Initiative, 2016-present

Victorian Library Technology Association (VALA), 2015-present

Information Architecture Institute, 2014-present

Association for Information Science & Technology (ASIS&T), 2011-present (Vice President of UNC-CH student chapter, 2011-2012)