

Katie Elizabeth Frey

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LIBRARIAN & WEB DEVELOPER

Developing digital tools to enable and enhance access to new and novel information resources. Specializing in web applications, linked data, and taxonomy creation. Writing Python scripts to access and acquire data from APIs into custom Django web applications, such bibliographic curation, a showcase of borrowable devices, and supporting the Unified Astronomy Thesaurus, a controlled vocabulary for the astronomy community. Experience translating technical issues and solutions to non-technical staff.

- Python, Django, Flask
- jQuery/d3/Node.JS
- SQL & noSQL databases
- Git/GitHub/GitLab
- JSON/JSON-LD
- HTML/CSS/SASS

PROFESSIONAL EXPERIENCE

Center for Astrophysics | Harvard & Smithsonian

Cambridge, Massachusetts

John G. Wolbach Library

Assistant Head & Digital Technologies Development Librarian

Apr 2017 – Present

- Lead digitization, transcription, and social media for Project PHaEDRA. Supporting development and funding of the Open Space Infrastructure for CubeSats project. Curating CfA Bibliography, publication reports for departments. Building online tools, interfaces, and standards to facilitate access to datasets, information objects, and research artifacts. Supervising student employees, developing project goals, providing direction and feedback.

Technical Information Specialist/Library Technician

Oct 2012 – Mar 2017

- Lead renovation of Wolbach Library website and online presence. Developed, designed and implemented the Wolbach Library Devices web application. Curate a monthly YouTube playlist of astronomy and space engineering videos. Evaluated new physical, print, and electronic resources for acquisition and integration into the collection. Automated repetitive tasks using PHP and Python scripting. Reference, journal access troubleshooting, cataloging, circulation.

Curator, Unified Astronomy Thesaurus

Oct 2012 – Present

- Developed a controlled vocabulary following linked open data and semantic web standards. Recommended concept additions, deletions, and other modifications based on usage by and feedback from the astronomical community. Published version releases and determined schedule.

Essential Information Partners

San Diego, California

Librarian, Verenum Corporation

Aug 2009 – Sept 2012

- Solo librarian, collection development, reference services, online research guides, vendor negotiations, troubleshooting subscription access, budget management, circulation.

Librarian, BP Biofuels Advanced Technology LLC

Oct 2010 – Aug 2012

- Solo librarian, collection development, in-depth reference and research services, subscription tracking, cataloging, circulation.

Gen-Probe Incorporated

Assistant Librarian

San Diego, California

Feb 2009 – Dec 2010

- Managed integrated library system, cataloged <250 market research reports, maintained budgets.
- Achieved Exceptional Performance Award for technical development of article request system that included an auto-populated form and easily incorporated into internal departmental webpages.

TECHNICAL SKILLS

- Django
- Flask
- Python
- JavaScript/jQuery
- Django REST Framework
- FastAPI
- NodestJS
- SQL & noSQL databases
- HTML/CSS/SASS
- Docker
- Git/GitHub/GitLab
- JSON/JSON-LD

EDUCATION

Master of Liberal Arts, Digital Media Design

Harvard University Extension School

Graduate Certificate in Web Technologies

Cambridge, Massachusetts

Highlighted Courses

- Web Programming/Python & JavaScript
- Modern & Mobile Front-End Design
- Planning Websites & Application
- App Dev w/ Node.JS, Express & Angular
- C, Unix Systems, and Web Interfaces
- Instructional Design

Master of Library and Information Science

University of Pittsburgh

Pittsburgh, Pennsylvania

Bachelor of Science in Astronomy

San Diego State University

San Diego, California

SELECTED PUBLICATIONS & PRESENTATIONS

Accomazzi, A.; Bouquin, D.; D'Abrusco, R.; Derriere, S.; Frey, K.; et al. Building the UAT as a Community. Bulletin of the AAS, vol. 54 (2). ADS bibcode: [2022BAAS...54b.019A](#)

Frey, K. Implementation of The Unified Astronomy Thesaurus. Bulletin of the AAS, vol. 54 (2). ADS bibcode: [2022BAAS...54b.018F](#)

Bouquin, D.; Carver, N.; Frey, K.; et al. LSTN: Library Space Technology Network. Bulletin of the AAS, vol. 54 (2). ADS bibcode: [2022BAAS...54b.014B](#)

Carver, N.; Correia, S.; Frey, K.; et al. Embracing the Crowd: People-powered Research to Preserve the History of Astronomy. Bulletin of the AAS, vol. 54 (2). ADS bibcode: [2022BAAS...54b.001C](#)

Frey, K.; et al. Unified Astronomy Thesaurus: Usage Stats and Release Cycle. Research Notes of the AAS, vol. 4 (4). ADS bibcode: [2020RNAAS...4...58F](#)

Frey, K.; Accomazzi, A. The Unified Astronomy Thesaurus: Semantic Metadata for Astronomy and Astrophysics. The Astrophysical Journal Supplement Series, vol. 236 (1), 24. ADS bibcode: [2018ApJS..236..24F](#)

Frey, K.; et al. Managing Contributions to the Unified Astronomy Thesaurus. Library and Information Services in Astronomy VIII: "Astronomy Librarianship in the era of Big Data and Open Science," Strasbourg, France, Edited by Lesteven, S.; Kern, B.; D'Abrusco, R.; Dorch, B.; EPJ Web of Conferences, vol. 186, id.09003. ADS bibcode: [2018EPJWC.18609003F](#)

Bouquin, D.; Frey, K.; et al. Project PHaEDRA: Preserving Harvard's Early Data and Research in Astronomy. Library and Information Services in Astronomy VIII conference held at Strasbourg, France, Edited by Lesteven, S.; Kern, B.; D'Abrusco, R.; Dorch, B.; EPJ Web of Conferences, vol. 186, id.07003. ADS bibcode: [2018EPJWC.18607003B](#)

Frey, K. Unified Astronomy Thesaurus. Presented at the 227th Meeting of the American Astronomical Society, Author and Referee Workshop, Kissimmee, FL. January 6, 2016. http://journals.aas.org/news/d/Unified_Astronomy_Thesaurus_Katie_Frey_227th_AAS.pdf

Frey, K. and Erdmann, C. Unified Astronomy Thesaurus. Presented at the Workshop on Shared Curation of Astronomical Literature, Wolbach Library, Cambridge, MA. June 12, 2015. <http://dx.doi.org/10.6084/m9.figshare.1471704>

Frey, K.; et al. Management of the Unified Astronomy Thesaurus. Open Science at the Frontiers of Librarianship. Proceedings of Library and Information Services in Astronomy VII conference held 17-20 June 2014, at Astronomical Observatory of Capodimonte, Naples, Italy 17-20. Edited by A. Holl, S. Lesteven, D. Dietrich, and A. Gasperini. ASP Conference Series, vol. 492, p.204. ADS bibcode: [2015ASPC..492..204F](#)

Accomazzi, A.; et al including Frey, K. The Unified Astronomy Thesaurus. Astronomical Data Analysis Software and Systems XXIII. Proceedings of a meeting held 29 September - 3 October 2013 at Waikoloa Beach Marriott, Hawaii, USA. Edited by N. Manset and P. Forshay ASP conference series, vol. 485, p.461. ADS bibcode: [2014ASPC..485..461A](#)