

Ed Summers  
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I am a software developer and design researcher with two decades of experience bridging the worlds of libraries and archives with the World Wide Web. I have worked in academia, startups, corporations and government. I work best as a member of agile, highly collaborative teams that focus on furthering social justice work through community building, knowledge sharing and a commitment sustainability. In my research I am especially interested in sociotechnical approaches to digital preservation and memory work.

## Skills

- web technology, APIs, REST, linked data, web archiving
- digital preservation, data management, knowledge management, search
- open source, standards development, community building
- automated testing, agile software development, rapid prototyping
- Python, JavaScript, Go, Ruby, Perl, PHP, Java, C, Scheme
- data analysis, Pandas, SciPy, Spark
- Ubuntu, Red Hat, Amazon Web Services

## Work History

Research Faculty  
Maryland Institute for Technology in the Humanities  
University of Maryland  
08/2014 - Present

- digital humanities research and development
- linked data publishing
- sustainable digital preservation workflows
- automated testing
- requirements gathering / project management

Information Technology Specialist  
Repository Development Center  
Library of Congress, Washington, DC  
03/2006 - 08/2014

- digital preservation and repository software design and development
- lead software developer on the National Digital Newspaper Project
- created a web based quality assurance tool for handling high volume image digitization projects
- social media archiving (Twitter)
- designed and implemented the Library of Congress Linked Data Service
- contributing member to the Semantic Web Deployment Group, Library Linked Data Incubator Group, and eGov Interest Group at the W3C

Consultant  
George Washington University, Washington, DC  
10/2013 - 12/2014

- Django Web Development
- Voyager ILS integration (Oracle)
- Serial Solutions Summon API integration

Consultant  
Nelson Institute for Environmental Studies  
University of Wisconsin, Madison, WI  
09/2013 - 06/2014

- web harvesting
- data management

Consultant  
Hypothes.is  
San Francisco, CA  
01/2013 - 10/2013

- JavaScript and Python development
- development of the open source Annotator and Annotator Store projects
- design and implementation of [cross format annotation support] cross-format-annotation
- functional and unit testing support using Selenium, PyTest, Travis-CI and SauceLabs

Consultant  
GlueJar  
11/2011 - 04/2012

- Django software development UnglueIt unglueit
- Amazon AWS Deployment (EC2, RDS, Route 53) for dev, test and production
- Google Books integration
- Google, Facebook, Twitter social media integration
- automated testing and continuous integration (Jenkins)

Consultant  
Canary Project  
Yale School of Medicine, New Haven, CT  
07/2005 - 12/2005

- Python object oriented design
- automated testing
- implemented a reporting framework
- Quixote, PyLucene, MySQL, Red Hat administration

Senior Software Engineer  
Follett Corporation, McHenry IL  
05/2005 - 03/2006

- building and supporting a distributed knowledge management application
- requirements gathering and project planning
- web service design and implementation
- ONIX metadata harvesting and ingest
- Java performance tuning
- automated testing
- database administration
- Linux/Windows systems administration

Consultant  
Performix, Chicago IL  
02/2004 - 04/2005

- object oriented design
- refactored large Perl codebase
- Perl, Apache, mod\_perl, DB2

Consultant  
Queens Borough Public Library, New York NY  
06/2004 - 05/2005

- character encoding conversion
- controlled vocabulary mining

- Perl data processing training

#### Consultant

Notre Dame University, South Bend IN 06/2004 - 12/2004

- training in object oriented programming and unit testing
- high volume metadata harvesting
- guidance and implementation search technologies
- ported Java Commonn Query Language parser to Perl

#### Applications Developer

Follett Library Resources, McHenry IL

07/2002 - 05/2004

- PHP/Perl development in a Unix/Oracle environment
- determined project requirements, created task lists and schedules
- designed and developed library collection analysis application
- unit and application level automated testing
- Oracle/Apache stress testing and performance tuning
- XML processing
- distributed application design using SOAP/XMLRPC

#### Senior Software Engineer

CheetahMail, New York NY

02/2000 - 07/2002

- team lead in a group of 8 programmers
- developed data processing infrastructure for Fortune 500 clients
- designed/developed real time reporting system
- creation and maintainance of web service API
- in depth knowledge of SMTP and HTTP protocols
- web services development
- technical representative for partners and sales
- networking and systems administration as required

#### Electronic Resources Librarian

Old Dominion University, Norfolk, VA

04/1998 - 02/2000

- SGML data processing for electronic texts for 39 universities in Virginia.
- created current awareness system to alert students/faculty to new items in their field of interest.
- created XML publishing system for archival finding aids.
- developed serials database for locating licensed fulltext.
- III/OCLC metadata management integration

#### Visiting Assistant Professor University of Illinois, Champaign-Urbana, IL

08/1996 - 03/1998

- web/database development (ASP/SQLServer)
- collection development and cataloging in Sociology and Political Science
- preservation of 19th century criminology pamphlet collection
- managed reference services in the Social Science Library

## Selected Projects

These are some projects where I've been directly involved in the technical development.

- Unlocking the Airwaves - NEH funded virtual reunification and minimal computing project
- Documenting the Now - Mellon funded social media archiving practices and tools
- Chronicling America - Library of Congress access to historical newspapers.

- Linked Data Service - Publishing controlled vocabularies at the Library of Congress using Linked Data
- Hypothesis - An annotation tool for the web
- Wikistream - visualize realtime edits to all major language Wikipedias
- Anon - track anonymous Wikipedia edits using Twitter
- Pymarc - a python library for MARC processing
- jobs.code4lib.org - a jobs board for the code4lib community
- Linkypedia - view how websites are used on Wikipedia
- Fondz - generate an archival description for describing born digital content
- Microdata - a python library for parsing HTML 5 microdata
- rdflib - a Python library for processing RDF

## Selected Publications

- Appraisal Talk in Web Archives. Archivaria. May, 2020.
- Archival Circulation on the Web: The Vine-Tweets Dataset. Cultural Analytics. June, 2019.
- Algorithms and Agenda-Setting in Wikileaks' #PodestaEmails Release. Information, Communication & Society. 2019
- Appraisal Practices in Web Archives. SocArXiv Papers, 2018.
- Twitter and Tear Gas: Book Review. Internet Histories, 2017.
- Ferguson and the death of Michael Brown on Twitter: #BlackLivesMatter, #TCOT, and the evolution of collective identities. Ethnic and Racial Studies, 40(10).
- #sayhername: a case study of intersectional social media activism. Ethnic and Racial Studies, 40(10).
- Bots, Seeds and People: Web Archives as Infrastructure. Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing, CSCW 17.
- Automating Transparency. The Source. April, 2015.
- MJ no more: Using Concurrent Wikipedia Edit Spikes with Social Network Plausibility Checks for Breaking News Detection. 2013.
- Linking Things on the Web: A Pragmatic Examination of Linked Data, 2013.
- Key Choices in the Design of Simple Knowledge Organization System (SKOS), 2013.
- Library Linked Data Final Report, W3C Incubator Group Report, October 2011.
- SKOS Simple Knowledge Organization System Primer, W3C Working Group Note, August 18th, 2008. <http://www.w3.org/TR/skos-primer/>
- LCSH, SKOS and Linked Data, Proceedings of the International Conference on DublinCore and Metadata Applications, 2008.
- Following Your Nose to the Web of Data, Information Standards Quarterly, 2008
- Building OAI-PMH Harvesters With Net::OAI::Harvester Ariadne, no. 38, Jan 2004.
- Cyril: Expanding the Horizons of MARC21, Library Hi Tech, v. 22, no. 1, 2004.
- A Consortial Approach to Cooperative Cataloging and Authority Control: The Virtual Library of Virginia Experience, Resource Sharing and Information Networks, v. 16, no. 1, 2003, p. 33-53.
- Paying Homage to Perl (PHP), The Perl Review, January, 2003.
- MARC it your way: MARC.pm, Information Technology and Libraries, March, 2002.
- Comprehensive Access to Periodicals: A Database Solution, Library Collections Acquisitions and Technical Services, v. 24, no. 2, 2000, p. 33-44.
- Show Me the Metadata, Against the Grain, v.11, no.1, 1998.
- Gateways to Social Work/Welfare on the Net, C&RL News, v.59, no. 3, 1998, p.163-167.

## Education

- PhD, College of Information Studies, University of Maryland, 2015-2020.
- MLS, School of Communications, Information and Library Science, Rutgers University, 1995-1996.
- BA English and American Literature, Rutgers University, 1987-1991.

## Awards

- 2018 Community Capacity Award. Digital Library Federation.
- 2018 Exemplary Service Award. Society of American Archivists.
- 2015 University of Maryland Scholarship and Research Award
- 2015 Frederick G. Kilgour Award for Research in Library and Information Technology. American Library Association.
- 2015 Shorty Award.