



UNIVERSITY LIBRARIES

Position Type: Contingent I, Exempt

Position Title: Research Developer

Division: Digital Services and Technologies

Department: Software Systems Development and Research

Reports to: Ben Wallberg

Prepared by: Ben Wallberg, David Dahl

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As the largest university library system in the Washington D.C.-Baltimore area, the University of Maryland (UMD) Libraries serves more than 41,000 students and 14,000 faculty and staff of the flagship College Park campus. The Libraries' extensive collections, programs, and services enable student success, support teaching, research, and creativity, and enrich the intellectual and cultural life of the community. A member of the Big Ten Academic Alliance and the Association of Research Libraries, the UMD Libraries were honored with the 2020 Excellence in Academic Libraries award in the university category from the Association of College and Research Libraries.

The University of Maryland Libraries are committed to advancing diversity, equity, inclusion, and accessibility. We support university and library efforts to create a more just campus environment, understanding the unique, interdisciplinary focus of libraries and archives as collectors and curators of the historical, literary, artistic, and scientific record. We provide collections, services, and programs that reflect the diversity of our community, heighten cultural awareness, and incorporate the histories, experiences, and expressions of those who have been historically marginalized and/or underrepresented. We work to ensure equitable access to our facilities, resources, and services.

NATURE OF WORK

The Research Developer supports the Pool Reports Collection of the White House Correspondents' Association (WHCA). The WHCA was founded in 1914 to promote excellence in journalism and robust reporting on the U. S. president and the U. S. presidency. The WHCA members form a press pool that provides journalistic reporting on the daily activities and events

of the President and Vice-President of the United States. The University of Maryland Libraries serves as the official repository for the WHCA Pool Reports Collection, which includes both paper and digital pool reports.

One of the features of this collection is the increased use of linked content in the pool reports, which are distributed and collected digitally via email. These links provide additional context and sourcing for members of the WHCA. Most of these files are URLs which link out to audio, video, and image files on the web. Often, these links disappear or expire if they are not harvested in a timely manner. Because the linked content in pool reports is an integral part of the reporting and the history, we believe it is crucial to find a sustainable, programmatic way to harvest the additional content from external sources.

The Libraries have created workflows to a) collect the email pool reports as they are generated, b) capture the email in a preservation ready format, c) transform the email into a format for ingest into our Digital Collections platform, d) partially automate selection of pool reports and redaction of sensitive information, e) manually review and update selected pool reports, f) ingest into Digital Collections, and g) present the pool reports in a [demonstration website](#). The Research Developer would work to more fully automate and improve these workflows, process the backlog of emails, and enhance the preservation workflows.

Auto-harvester and playback tools and utilities would allow us to process and present the collection in a more timely, efficient manner, but this will also benefit the larger library and archives community. When we build the tools to harvest these external links, especially audio and video clips, as well as still images that provide context for email archival documents, we plan to share these tools with the library and archives community.

The Research Developer will work to improve the existing workflows in these areas:

1. Pool report capture and preservation.
2. Automated selection of pool reports from the email stream.
3. Automated redaction of sensitive information.
4. Manual review and update of the selected pool reports.

And possibly perform these tasks, as time allows:

5. Automated named entity and other metadata extraction.
6. Research open-source or commercial web archiving and playback tools for potential use in the project.
7. Determine process for extracting URLs in need of archiving from the pool reports and perform initial harvesting.
8. Integrate playback of archived web content into the WHCA website.
9. Apply machine learning to the redaction process.

The incumbent will participate in activities throughout all phases of the software development lifecycle, producing thorough documentation, managing applications using version control, and

following team procedures and workflows for code release. UMD Libraries is a collaborative environment with opportunities to share knowledge and experiences with other developers and Libraries staff. All team members are relied upon to identify and recommend solutions that enhance the work of the team.

DUTIES AND RESPONSIBILITIES

- 20% - Research and analyze existing technologies, applications, and techniques for a) harvesting and playback of email with linked content, b) automated creation of metadata, and c) automated redaction of content.
- 10% - Document research findings, communicate with the implementation team, and work with the team to make implementation decisions.
- 50% - Program tools, applications, and integrations in support of a) harvesting and playback of email with linked content, b) automated creation of metadata, and c) automated redaction of content. Primarily programs command-line tools using the Python programming language.
- 10% - Utilize project management tools such as Jira to record and monitor progress; manage code using Git; monitor ticket-tracking systems for troubleshooting; produce and maintain thorough application documentation
- 10% - Other duties as assigned
 - Other software programming and management duties as assigned
 - Participates in university and/or library activities and training related to promoting diversity, equity, inclusion, and accessibility
 - Contributes to achieving the University's and/or the Libraries' diversity, equity, inclusion, and accessibility goals

PHYSICAL DEMANDS

Extensive computer use.

SUPERVISORY RESPONSIBILITIES

None

QUALIFICATIONS

Required:

- Demonstrated ability to research and learn new technologies and programming languages
- Strong user service orientation
- Ability to work independently and as a member of a team
- Excellent interpersonal skills
- Excellent written and verbal communications skills

Preferred:

- Working knowledge of UNIX/Linux
- Demonstrated ability to analyze and solve complex technical issues

EDUCATION

Required: Bachelor's Degree (by start of employment) or a minimum of four years of related professional IT experience.

Preferred: Bachelor's Degree in a field related to information sciences, computer sciences and engineering, or information management (by start of employment)

EXPERIENCE

Required:

- None

Preferred:

- 1 year of programming experience (or 3 years of experience, if Bachelor's Degree is not in a field related to information sciences, computer sciences and engineering, or information management)
- Experience programming using Python
- Experience with relational database design, development and use, especially PostgreSQL
- Experience using version control software, especially Git
- Prior experience supporting IT in an academic research library or archives

Vaccination Requirement

The University of Maryland has made the safety of our students, faculty and staff, and our surrounding communities a top priority. As part of that commitment, the University System of Maryland (USM) recently announced that students, faculty, and staff on USM campuses this fall, including UMD, are required to be vaccinated against COVID. As a prospective and/or a new employee at UMD, you will be required to comply with the University's vaccination protocol. Proof of full vaccination will be required before the start of employment in order to work at any

University of Maryland location. Prospective or new employees may seek a medical or religious exemption to the vaccination requirement at return.umd.edu and must have an approved exemption prior to the start of their employment. Failure to provide proof of vaccination or to obtain approval for a medical or religious exemption will result in the offer of employment being rescinded.

Background Check Requirement

Offers of employment are contingent on completion of a background check. A prior criminal conviction or convictions will not automatically disqualify a finalist from employment in the position.