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Abstract

The State Library of Ohio requests a grant of $25,000 from the Institute of Museum and Library Services' Sparks! Ignition Grants for Libraries program for Libraries by the Numbers, a data visualization tool for libraries. We propose to develop an innovative web based tool to enable Ohio public libraries to create customized infographics based on their own unique library statistics. This tool will include six pre-established infographic templates based on general library subject areas. With these graphics, public libraries across the state will be able to share their statistics in an easy to understand format to aid their staff, boards and the public in developing stronger library services.

Public libraries are required to submit data to IMLS every year, but often don't know how to leverage that data for their own use. The data collected by IMLS could aid libraries in decision making, sharing their resources with staff, patrons and boards, if displayed in an easy to understand format. This project will work to address that issue by providing customizable infographics and data visualizations backed by the already accumulated IMLS public library statistics to present information in ways that are quickly comprehensible by all.

While it is our goal to eventually make this into a tool that can be used nationwide, at the conclusion of the one year grant period, all Ohio based public libraries will benefit from this project. We will include current and historic data collected by the State Library of Ohio for inclusion in the IMLS public library statistics and make that data easily visualizable for use by library administration, boards and staff.

This project fits within IMLS strategic goals two and four. By having easily understandable data tools, libraries will be better able to know the communities they serve and to function as strong community anchors that enhance civic engagement, cultural opportunities, and economic vitality. This project will also help to ensure that library decision makers are armed with their own data and will be better able to analyse that data to develop policies that help them evolve their services.

Several tools have already been developed aiding libraries in presenting data visually. With this initiative we are looking to build on those projects by specifically using library based data in visualization. The previously IMLS funded Digital Inclusion Survey project includes a small portion of the IMLS Public Library Statistics in their infographics, but it is our intent to create multiple templates to enable libraries to evaluate their current operations, advocate for funding, services, and future initiatives.

Information about the project, from development through post-completion will be shared with libraries across the state through the statewide listserv, presentations at Ohio library conferences and as it progresses, at national library conferences. Within the State Library, this project will enable the library consultant staff to better provide libraries with data resources to aid in the strategic planning process.

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Statement of need:

Public libraries are required to submit data to IMLS every year, but often don't know how to leverage that data for their own use. The Public Libraries Survey (PLS) contains valuable information that could aid libraries in decision making, marketing, levy and financial initiatives and information sharing with staff, patrons and boards if displayed in an easy to understand format. This project will work to address this issue by providing customizable infographics and data visualizations backed by the already accumulated PLS statistics to present information in ways that are quickly comprehensible by all.

While several large metropolitan library systems have created visualization initiatives for understanding their own data, the vast majority of libraries don't have the staff and resources to work with tools like Tableau to share their data visually. This project will enable libraries of all sizes to create customizable data visualizations and infographics to help them better serve their communities.

We propose to develop a web based tool, Libraries By the Numbers, to enable Ohio public libraries to create customized infographics based on their own unique library statistics. This tool will include six pre-established templates based on general library subject areas (please refer to supportingdoc1.pdf for template example.With these graphics, public libraries across the state will be able to share their statistics in an easy to understand format to aid their staff, boards and the public in developing stronger library services.

In addition to the library overview template, the content for the remaining five templates will be created based on a survey of Ohio public library directors to ensure they are involved in the project. The project has already gained state-wide support from state library organizations who believe the project will advance the library profession (please refer to supportingdoc2.pdf)

While it is our goal to eventually make this into a tool that can be used nationwide, at this time all Ohio based public libraries will benefit from this project. We will include current and historic data collected by the State Library of Ohio for inclusion in the PLS and make that data easily visualizable for use by library administration, boards and staff.

In the last two years, the State Library of Ohio has created one page infographics with general information for each of Ohio's 251 public library systems. These infographics have received much praise and have been used by library administrators to aid in multiple efforts.

Beyond what has been produced by the State Library of Ohio, the importance of data has been recognized on a state level. In 2015, OhioNET, a state based library organization serving over 300 libraries, hosted a one-day state conference called *Dive Into Data* (https://www.ohionet.org/dive-data). The conference featured library professionals from various backgrounds across the state who talked about how data is used in their institutions. Proposed project manager, Kirstin Krumsee presented a session at the conference entitled "Knowing Where to Draw the Line: Tools and Strategies for Visualizing Data."

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The intended result of this project is to create a web visualization tool that is comprised of six templates for different library services. This project falls in line with IMLS strategic goals. The tool can be used to enable libraries to be stronger partners in their communities as stated in IMLS Goal 2: Community. The tool also promotes Goal 4: Access providing a new and innovative web tool to increase public access to information, which will promote civic engagement.

To collect data for the IMLS Community performance measure statement, library directors will be surveyed to evaluate their use of data before the web tool is created and again after it is launched. The pre-survey will collect information on what infographic templates directors would like for the project to create and will gauge their current understanding of infographics and data visualization. The post survey will evaluate whether or not libraries have used the tool and if it has increased their understanding of their data and whether or not they are more interested in learning about how data visualization can be used in the library profession.

This project's goals not only align with IMLS, but also with its host institution, the State Library of Ohio. This project aims to:

- Allow users to efficiently create infographics from pre-established templates related to topics covered by the IMLS Public Library Statistics.
- Enable libraries to access their own statistics and present that data to stakeholders.
- Aid Ohio public libraries in data driven decision making.

Project goals correlate with State Library of Ohio Goal four to "expand access to resources in cost efficient ways through electronic channels" and Goal five to "lead innovation and development efforts for libraries to ensure ongoing relevance to communities across Ohio." By allowing free access to the Libraries By the Numbers web tool, librarians and library stakeholders will be able to utilize Ohio library statistics in a new and innovative way to further emphasize the importance of public libraries to communities across the state.

Several tools have already been developed aiding libraries in presenting data visually. With this initiative we are looking to build on those projects by specifically using library based data in visualization on a large scale, which makes this project innovative. The previously IMLS funded Digital Inclusion Survey project (http://digitalinclusion.umd.edu/) includes a small portion of the IMLS Public Library Statistics in their infographics, but it is our intent to create multiple templates based solely on these statistics to enable libraries to evaluate their current operations, advocate for funding, services and future initiatives.

If the project is successful, the State Library of Ohio will continue to enhance the product in the coming years and would like to extend the web tool to libraries nationwide. As with previous projects, the State Library of Ohio has continued to support projects that were initially funded with IMLS seed money. Examples include Connecting to Collections and Library Leadership Ohio.

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Impact:

The project's success will result in many benefits for the library community. A free resource will be available to public libraries and library stakeholders to present their data in a professional manner. This will enable these libraries to effectively make data driven decisions and promote the library's services to its community. Furthermore, it is our long term goal to allow libraries across the country to utilize this resource as the next step after the release of the Ohio based Libraries By the Numbers. The tool will then have a national impact and can be further developed based on the needs of the library community at large.

As of this time, a web tool using a large amount of current and historic IMLS data in a infographic web tool does not exist. Libraries will be able to access and present data in a new way thus building increased support for their initiatives and endeavors.

To measure the IMLS Community performance goal, quantitative and qualitative data will be collected from Ohio library directors in the form of pre and post surveys. Data collected will measure understanding of the product, understanding of infographics and data visualization in libraries, how the product was utilized, and examples of success libraries encountered as a result of using the tool. In addition to surveying, data analytics from the web tool will be acquired to access the number of users and templates most used during the test phase and after its release.

Information about the project will be shared with colleagues throughout the project and after its completion. The project's results, lessons learned and information for using this new service will be shared across the state through the statewide listserv, presentations at library conferences within the State of Ohio and as the project evolves, at national library conferences and events. Professional articles about the project will also be written for state-level library publications. This will allow members of the library profession to learn about the tool and about library infographics and visualizations. Within the State Library, library consultants will be able to use and promote the tool as a new data resource to aid in assisting libraries in creating effective strategic plans. Other staff members at the State Library will be able to use the data resource to share library data visually with the public.

Project Design:

The anticipated activities occur in the following order:

>   **Activity 1**: Conducting a pre-survey of Ohio library directors to discover desired content for templates and their current understanding of infographics and data visualizations.
>   **Activity 2:** Determining content for templates based on survey results, designing six infographic templates in Adobe Illustrator based on the currently gathered IMLS statistics (please refer to supportingdoc1.pdf for template example) and creating web branding.

Activity 3: Acquiring resources for the project such as a domain name, server space, PDF Code Library, and creating RFP documents to hire an outside contractor to work alongside the project managers to create a dynamic web tool for sharing the data visually.

Activity 4: Working alongside the contractor to create the web tool by collaborating on planning and analysis of project, creating the web tool, conducting maintenance when needed, and building the database to link data to the web tool.

Activity 5: Conducting usability and quality testing with three public libraries of varying sizes and funding levels and continue working with the developer to make needed changes before public release.

Activity 6: Creating and disseminating post survey to Ohio library directors to evaluate performance goals and analyze results for inclusion in conference presentations and scholarly articles about the product to be presented to the library community within the state and nationally.

The project will be planned, managed and implemented by State Library of Ohio Library Consultants Kirstin Krumsee and ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚ (please refer to resumes.pdf). The contractor will be hired in Activity Three of the project according to requirements in the RFP (please refer to Resumes.pdf). The RFP will be transmitted through standard channels including statewide listservs and the American Library Association website.

Anticipated resources will be acquired with grant funding between Activities Three and Five. They include the purchase of a website domain, server space and a PDF Code Library for the web presence. We will also need to hire an outside contractor to develop the site for $140 per hour. This is the standard hourly rate for web development contractors in Ohio. The projected timeline for the developer in Activities Four and Five are:

Step 1: Planning/Analysis/Management = 20 hours
Step 2: Report Request App Development = 40 - 50 hours
Step 3: Maintenance App Development = 40 - 50 hours
Step 4: Database work = 20 hours
Step 5: Testing = 15 hours

The State Library of Ohio will supply resources for the remaining phases of the project. Work time required for this project by the project managers will be considered a part of daily job duties. For Activity Two, the State Library already owns one Adobe Illustrator license which is assigned to Project Director, Kirstin Krumsee to perform her job duties in creating data visualizations for the State Library. Data collection resources to survey Ohio public library directors and evaluate the web tool in the testing phase will be supplied by the library by its membership in SurveyMonkey, facilitation of the Ohio public library director listserv, and in creating data collection tools. ▬▬▬▬▬▬▬▬▬▬▬▬▬ ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ A contractor will not be required for these phases of the project. Other State Library staff will be on

hand for additional assistance and consulting if needed such as the agency's IT Department, Marketing and Communications Manager, and State Data Coordinator.

To evaluate the project's impact on Ohio public libraries a pre-survey will be distributed to library directors in Activity One to collect information on the data content they would like the web tool to include and their current experience and knowledge of using infographics and data visualizations within the profession. This information will enable the project managers to design a dynamic web tool that will be useful to the community and provide information to the contractor regarding the site development.

To evaluate the product once it is created, three public libraries will be selected based on service area size and budget levels. These libraries will be provided with questionnaires to complete based on their experience using the web tool. To gain more in-depth qualitative information to evaluate the web tool, phone conversations will be held with the test libraries to go over the questionnaire and discuss other input, ideas and concerns about the product that the libraries may have. The directors and one other personnel member, chosen by the director, will be selected to test the product.

To assess the success of the product upon its release and to determine whether or not knowledge about infographics and data visualizations for use in libraries has increased, a post survey will be sent out to Ohio public library directors. All performance goal measure statements from IMLS Goal 2: Community will be asked, as well as, how libraries have specifically used the web tool and the impact that it has had within the library and externally in the community. This information will be useful in determining how to build upon the web tool as it is the intention of the State Library to support the project beyond the grant period.

To evaluate the tool itself, the application pages will incorporate Google Analytics or another analytics package capable of general tracking of usage. The system should also incorporate a simple mechanism for viewing the contents of the application logging table, displaying both detailed data and summary counts of graphics produced by library system and graphic type within a selected date range. We will also work with our state data coordinator throughout the project to ensure accuracy of the data presented in the graphics.

To track the project's progress and ensure goals and the project's intended results are reached weekly meetings of the project directors will be held to identify achievements, challenges, and determine next steps. Also, project directors will meet with their supervisor, Associate State Library for Library Services, Missy Lodge, to discuss the project's progress. State Librarian, Beverly Cain will be updated about the project monthly to ensure the project is move along efficiently and to allow her to update stakeholders such as the Ohio Public Library Council, Ohio Public Library Information Network, and others (please refer to supportingdoc2.pdf).

In addition to submitting the required white paper, the project directors, as a part of Activity Six will share the results of the entire project at state level conferences, events and in publications. Opportunities include, but are not limited to presenting at the Ohio Library Council Annual

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Convention and Expo and regional conferences and the Ohio Library Regional Libraries trainings. Articles will be submitted to state association publications and newsletters.

It is the intent of the project directors to present the project on a national level once presenting the web tool to state level constituents has been completed. Potential opportunities include presenting at the American Library Association Annual Conference, the Public Library Association Annual Conference, and the Research Institute for Public Libraries. Articles may also be submitted to publications released by these associations.

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Schedule of Completion

Phase	Tasks	Oct. 2016	Nov. 2016	Dec. 2016	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May 2017	Jun. 2017	Jul. 2017	Aug. 2017	Sep. 2017	Post-Grant
Activity 1	**Pre-Survey**													
	Create pre-survey in house	■												
	Send to Ohio public library directors listserv hosted by the State Library	■												
	Collect and analayze survey results (& Krumsee)	■	■											
Activitiy 2	**Design**													
	Determine template categories and content based on pre-survey results (& Krumsee)			■										
	Design templates (Krumsee)			■	■									
	Create design for web branding (e.g. logo) (Krumsee)		■	■										
Activity 3	**Acquire Resources**													
	Develop and release contractor RFP (& Krumsee)		■	■										
	Review applicants and elect contractor (& Krumsee)				■	■								
	Acquire domain name (Krumsee)					■								
	Acquire server space (Krumsee)					■								
	Purchase PDF Code Library (Krumsee)					■								
Activity 4	**Tool Development by Contractor**													
	Planning/Analysis/Management (Contractor)					■								
	Report Request App Development (Contractor)							■	■					
	Maintenance App Development (Contractor)							■	■					
	Database work (Contractor)						■	■						
Activity 5	**Testing and Release**													
	Create questionairre for phone conversations							■						
	Select and contact libraries to test tool (& Krumsee)							■						
	Test web tool for quality and usability (Selected Testers)									■				
	Collect and analyze questionairre results (and Krumsee)									■				
	Retool based on survey and other input (Contractor)									■	■			
	Release and market web tool (& Krumsee)									■	■			
Activity 6	**Post Evaluation and Results**													
	Create post survey in house										■			
	Send to Ohio public library directors listserv hosted by the State Library												■	
	Collect and analayze survey results (and Krumsee)												■	
	Write articles for state-level publications (& Krumsee)													■
	Submit proposals and present result of project at state and national conferences (& Krumsee)													■

DIGITAL STEWARDSHIP SUPPLEMENTARY INFORMATION FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded research, data, software, and other digital products. The assets you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. However, applying these principles to the development and management of digital products is not always straightforward. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and best practices that could become quickly outdated. Instead, we ask that you answer a series of questions that address specific aspects of creating and managing digital assets. Your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

Instructions

If you propose to create any type of digital product as part of your project, complete this form. We define digital products very broadly. If you are developing anything through the use of information technology (e.g., digital collections, web resources, metadata, software, or data), you should complete this form.

Please indicate which of the following digital products you will create or collect during your project (Check all that apply):

	Every proposal creating a digital product should complete …	Part I
	If your project will create or collect …	**Then you should complete …**
✓	Digital content	Part II
✓	Software (systems, tools, apps, etc.)	Part III
	Dataset	Part IV

PART I.

A. **Intellectual Property Rights and Permissions**

We expect applicants to make federally funded work products widely available and usable through strategies such as publishing in open-access journals, depositing works in institutional or discipline-based repositories, and using non-restrictive licenses such as a Creative Commons license.

A.1 What will be the intellectual property status of the content, software, or datasets you intend to create? Who will hold the copyright? Will you assign a Creative Commons license (http://us.creativecommons.org) to the content? If so, which license will it be? If it is software, what open source license will you use (e.g., BSD, GNU, MIT)? Explain and justify your licensing selections.

We will use a GNU general public license (GPL) to ensure that libraries and other institutions can freely modify and distribute the content created through the site and the site itself. While we would like to maintain and update the site for as long as possible, we recognize that other institutions may be able to improve on the product over the coming years.

A.2 What ownership rights will your organization assert over the new digital content, software, or datasets and what conditions will you impose on access and use? Explain any terms of access and conditions of use, why they are justifiable, and how you will notify potential users about relevant terms or conditions.

As the data and graphic design elements used in the creation of the infographics are U.S. and Ohio state government works, we assert no ownership over the content.

A.3 Will you create any content or products which may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities? If so, please describe the issues and how you plan to address them.

The data we will be using is already openly available via the IMLS Public Library Data Files and the State Library of Ohio Public Library Statistics and as there are no privacy concerns.

Part II: Projects Creating or Collecting Digital Content

A. **Creating New Digital Content**

A.1 Describe the digital content you will create and/or collect, the quantities of each type, and format you will use.

We will create customized infographics based on IMLS and Ohio specific Public Library Statistics. This tool will include six pre-established templates based on general library subject areas. In this stage of the project we will be able to produce 251 infographics for each template for a total of 1,506 infographics.

A.2 List the equipment, software, and supplies that you will use to create the content or the name of the service provider who will perform the work.

Adobe Illustrator
Desktop computers
SQL Server
Website created as part of the grant project

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to create, along with the relevant information on the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

Infographics will be output at internet appropriate 72dpi JPEGs for use on library web pages. Images will also be exportable to PDF. JPEG images will adhere to ANSI and ISO standards related to the creation of born digital images.

B. **Digital Workflow and Asset Maintenance/Preservation**

B.1 Describe your quality control plan (i.e., how you will monitor and evaluate your workflow and products).

We will ensure quality control by conducting thorough testing during the development process, reviewing error logs to identify problems early on and ensuring that there is help available should any library reach out regarding an error in the site.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance (e.g., storage systems, shared repositories, technical documentation, migration planning, commitment of organizational funding for these purposes). Please note: You may charge the Federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the Federal award. (See 2 CFR 200.461).

It is our plan to continue to support the web site and add the most current IMLS data to the site after the award period. If time and funding allow we would also like to add additional features and templates to meet the changing needs of libraries in Ohio and potentially around the country as well. To prepare for future support of the tool, coding and other technical information will be documented by the contractor(s). Server needs will be maintained during and after the project by the State Library's IT Department. They will also assist with other sustainability needs.

C. **Metadata**

C.1 Describe how you will produce metadata (e.g., technical, descriptive, administrative, or preservation). Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, or PREMIS) and metadata content (e.g., thesauri).

As our project is not related to digitization or classification, we will not be using metadata.

C.2 Explain your strategy for preserving and maintaining metadata created and/or collected during and after the award period of performance.

As our project is not related to digitization or classification, we will not be using metadata.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of digital content created during your project (e.g., an API (Application Programming Interface), contributions to the Digital Public Library of America (DPLA) or other digital platform, or other support to allow batch queries and retrieval of metadata).

As our project is not related to digitization or classification, we will not be using metadata.

D. **Access and Use**

D.1 Describe how you will make the digital content available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

The content will be openly available online through the website created as part of the project.

D.2 Provide the name and URL(s) (Uniform Resource Locator) for any examples of previous digital collections or content your organization has created.

Ohio Memory: http://www.ohiomemory.org/

Part III. Projects Creating Software (systems, tools, apps, etc.)

A. **General Information**

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) this software will serve.

We propose to develop a web based tool to enable Ohio public libraries to create customized infographics based on their own unique library statistics as gathered by IMLS. This tool will include six pre-established templates based on general library subject areas. In this phase the site will allow individuals to select an Ohio library system and subject area and will produce an infographic utilizing data from that library's submitted public library statistics. The primary intended audience is library administration, boards and staff.

After selecting the library and template type, the application will retrieve the appropriate library system's data and the specifications for the design and, using that data, produce the desired output file and send it to the user. The output graphic will be based on a pre-designed jpeg or pdf file onto which the application will overlay the desired data.

A.2 List other existing software that wholly or partially perform the same functions, and explain how the tool or system you will create is different.

IMLS Data Catalog- While the site allows libraries to work with and create graphs of their own statistics, our system will simplify the process, creating infographics on the most commonly used data from the public library statistics. The output will be easily readable and understandable by library administrators, but also by the general public. It can also be used as a promotional tool.

Digital Inclusion Survey- The previously IMLS funded Digital Inclusion Survey project includes a small portion of the IMLS Public Library Statistics in their infographics, but it is our intent to create multiple templates to enable libraries to evaluate their current operations, advocate for funding, services, and future initiatives.

Infographic tools like Piktochart and Infogr.am- These online tools allow individuals to create infographics, but often require payment or are company branded. There is no integration with the Public Library Statistics or collection of library specific images.

B. **Technical Information**

B.1 List the programming languages, platforms, software, or other applications you will use to create your software

(systems, tools, apps, etc.) and explain why you chose them.

The State Library of Ohio is preparing a preliminary prototype for this application using the .Net architecture. The final product may be developed in .Net or another broadly supported programming language. The programming needed to produce the jpeg graphics should utilize a standard non-proprietary vector graphics programming library. The programming needed to produce the Acrobat/PDF documents should utilize a purchased 3rd party development library capable of modifying a PDF template as needed.
The application will store relevant data in a SQL database. Depending on the selected architecture, this might be either SQL Server, MySQL, or another appropriate choice.

B.2 Describe how the intended software will extend or interoperate with other existing software.

The software will be a standalone product, but will build on IMLS collected data and add an additional element to the currently available IMLS Data Catalog.

B.3 Describe any underlying additional software or system dependencies necessary to run the new software you will create.

The website will depend on the .csv Public Library Statistics files provided by IMLS and the State Library of Ohio Public Library Statistics.

B.4 Describe the processes you will use for development documentation and for maintaining and updating technical documentation for users of the software.

Development documentation will be assembled by the hired software developer who will work alongside project coordinators. As the project progresses, we will update the documentation as needed. To ensure that documentation is properly collected and maintained, development documentation will be a part of the RFP for the developer. Project coordinators will consult with State Library of Ohio Information Technology staff to ensure documentation has been properly gathered throughout the project.

B.5 Provide the name and URL(s) for examples of any previous software tools or systems your organization has created.

Guiding Ohio Online: http://guidingohioonline.org

Ohio Memory: www.ohiomemory.org

C. **Access** an**d** Us**e**

C.1 We expect applicants seeking federal funds for software to develop and release these products under an open-source license to maximize access and promote reuse. What ownership rights will your organization assert over the software created, and what conditions will you impose on the access and use of this product? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain any prohibitive terms or conditions of use or access, explain why these terms or conditions are justifiable, and explain how you will notify potential users of the software or system.

We will use a GNU general public license (GPL) to ensure that libraries and other institutions can freely modify and distribute the content created through the site and the site itself. While we would like to maintain and update the site for as long as possible, we recognize that other institutions may be able to improve on the product over the coming years.

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

We will place the code created into GitHub with open availability to anyone interested in using it.

C.3 Identify where you will be publicly depositing source code for the software developed:

     Name of publicly accessible source code repository: GitHub

     URL: http://github.com

Part IV. Projects Creating a Dataset

1. Summarize the intended purpose of this data, the type of data to be collected or generated, the method for collection or generation, the approximate dates or frequency when the data will be generated or collected, and the intended use of the data collected.

2. Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

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3. Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

4. If you will collect additional documentation such as consent agreements along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

5. What will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

6. What documentation (e.g., data documentation, codebooks, etc.) will you capture or create along with the dataset(s)? Where will the documentation be stored, and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

7. What is the plan for archiving, managing, and disseminating data after the completion of the award-funded project?

8. Identify where you will be publicly depositing dataset(s):

   Name of repository:
   URL:

9. When and how frequently will you review this data management plan? How will the implementation be monitored?