Archives Unleashed Project

Community Report

2017 -2020

The Archives Unleashed Project

Introduction

Welcome to the Archives Unleashed Project Community Report!

Our team is excited to share a summary of activities and outcomes that have been completed by the Archives Unleashed Project between 2017 and 2020.

We sincerely appreciate your support, participation, and enthusiasm as our team has worked towards lowering barriers to access for working with web archives.

The Archives Unleashed Project

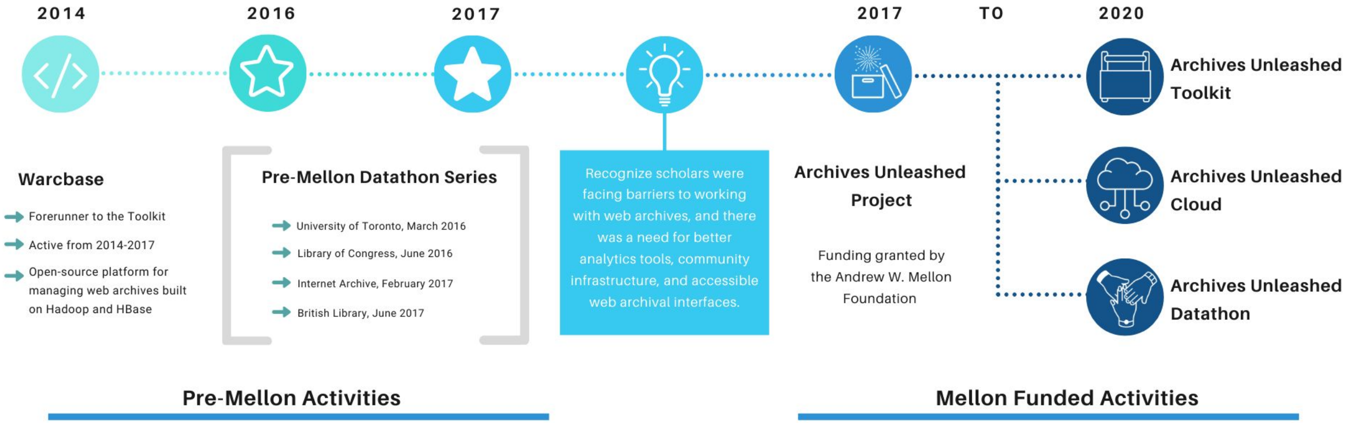
History

The Archives Unleashed Project recognizes the critical role that web archives play for scholars studying the 1990s onward.

The project grew out of a series of datathons held between 2016-2017, which identified the need for better analytics tools, community infrastructure, and accessible web archival interfaces.

In 2017, the Archives Unleashed Project was awarded a grant from the Andrew W. Mellon Foundation.

From 2017 - 2020 the project has developed tools, resources, and hosted datathons to bridge an accessibility and usability gap to web archives.



2014

Warcbase

- Forerunner to the Toolkit
- Active from 2014-2017
- Open-source platform for managing web archives built on Hadoop and HBase

2016 **2017**

Pre-Mellon Datathon Series

- University of Toronto, March 2016
- Library of Congress, June 2016
- Internet Archive, February 2017
- British Library, June 2017

Recognize scholars were facing barriers to working with web archives, and there was a need for better analytics tools, community infrastructure, and accessible web archival interfaces.

2017 TO 2020

Archives Unleashed Project

Funding granted by the Andrew W. Mellon Foundation

Archives Unleashed Toolkit

Archives Unleashed Cloud

Archives Unleashed Datathon

Pre-Mellon Activities

Mellon Funded Activities

The Archives Unleashed Project

Project Team

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The Archives Unleashed Project

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The Archives Unleashed Project

Goals

The Archives Unleashed Project is dedicated to lowering barriers to access for working with web archives at scale, with a focus in three areas:

Accessibility

Community

Sustainability

The Archives Unleashed Project

Goals

- We know that access remains a significant **barrier** in the use of Web archives.

- By **access / accessibility**, we refer to the ability to make use of something, or capability of being reached, used, understood or appreciated.

- Archives Unleashed incorporates the spirit of access/accessibility by:
    a. Providing multiple access points for exploring web archives via development of the Toolkit, Cloud, and additional platforms;
    b. Ensuring Tools and platforms are created as user friendly as possible; and
    c. Creating documentation and resources to support training and learning.

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Goals

- Building community has been a vital component and goal of the project.
- Archives Unleashed datathon events have been a primary activity through which we’ve developed a community of users around our tools.
- Our team has also invested and participated in the wider web archival community through additional scholarly activities, such as institutional collaborations, conferences, and meetings.

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Goals

- Sustainability planning speaks to the long term lifecycle of the project.

- The primary goal is to ensure a project's survival and continued efforts once the grant cycle has ended.

- Archives Unleashed has developed tools and platforms with sustainability in mind, specifically by adopting widely adopted and stable programming languages and best practices.

- Our team has also engaged in collaboration and partnerships with various institutions.

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Deliverables

Aligned with the aforementioned goals, the Archives Unleashed Project outlines three main deliverables under the 2017-2020 Mellon funding:

Toolkit

Cloud

Datathons

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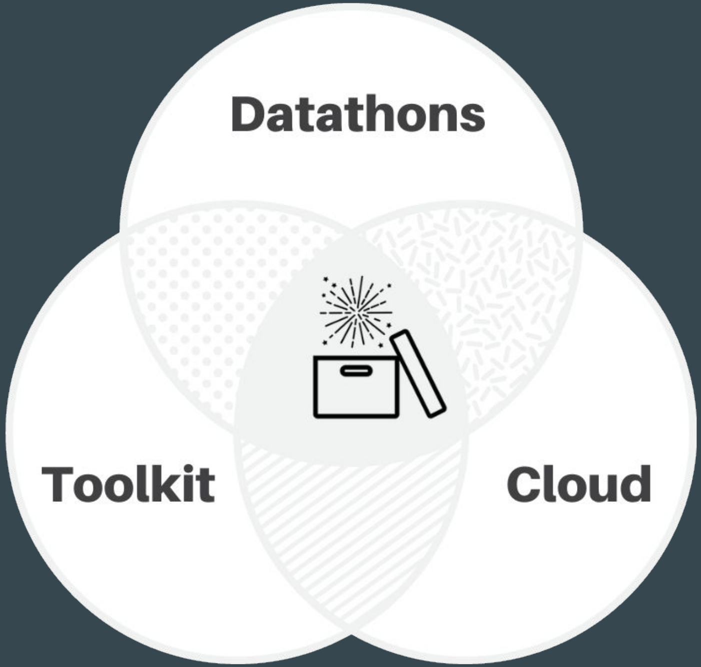
Deliverables

1. **Develop the Archives Unleashed Toolkit**
   - Apply modern big data analytics infrastructure to scholarly analysis of web archives.

2. **Deploy the Archives Unleashed Cloud**
   - Provide a one-stop, web-based portal for scholars to ingest their Archive-It collections and execute a number of analyses with the click of a mouse.

3. **Organize Archives Unleashed Datathons**
   - Build a cohesive and sustainable user community by bringing the core project team members together with librarians, archivists, and other interested researchers.



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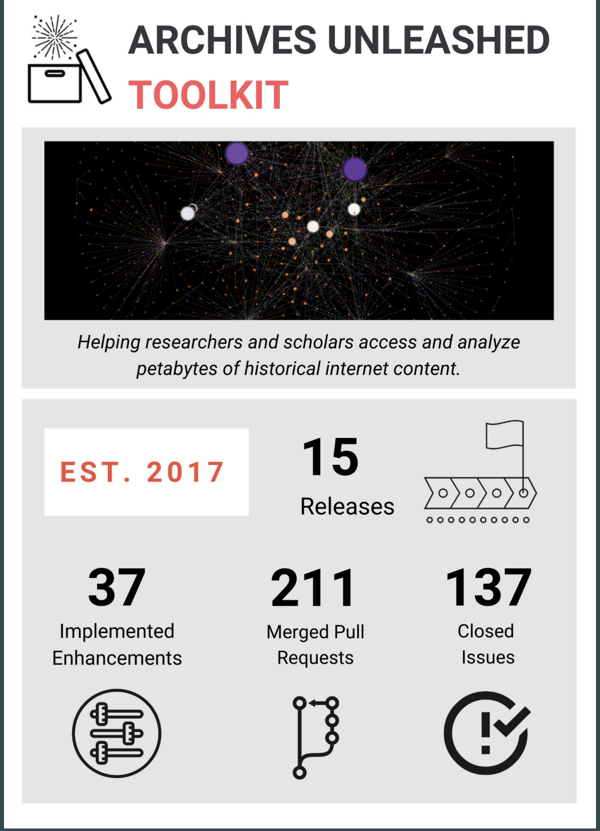
Deliverables - Develop the Toolkit

The Archives Unleashed Toolkit is an open-source platform for analyzing web archives, built on Apache Spark

Accomplished:

- 0.80.0 Release
- Added Python as an additional analytics language
- Developed a modular analysis architecture to align with scholarly workflows
  - Supports both RDD (Resilient Distributed Datasets) and DF (DataFrame) outputs
  - # of UDF in Scala (RDD &DF) and Python
- Developed a scholarly workflow approach, FEAV Cycle
- Created comprehensive documentation



ARCHIVES UNLEASHED
TOOLKIT

Helping researchers and scholars access and analyze petabytes of historical internet content.

EST. 2017

15
Releases

37
Implemented Enhancements

211
Merged Pull Requests

137
Closed Issues

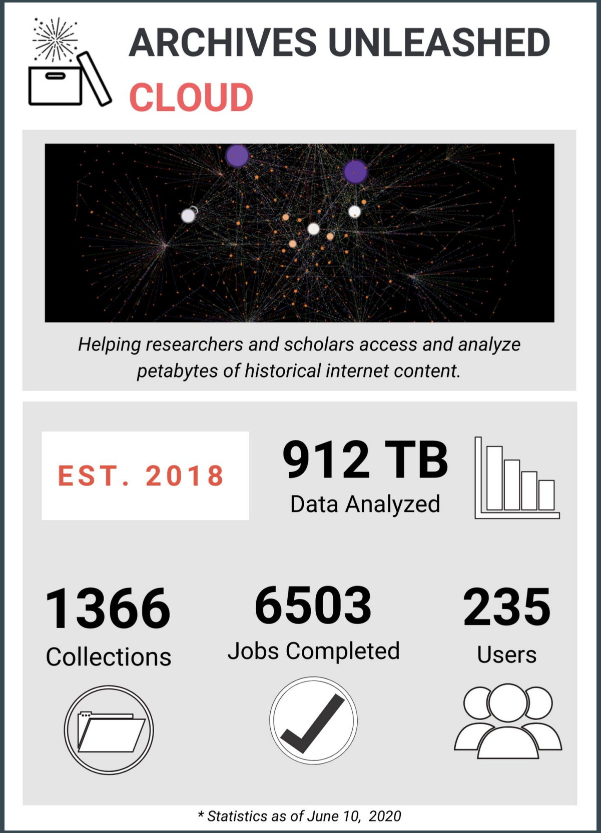
The Archives Unleashed Project

Deliverables - Deploy the Cloud

The Archives Unleashed Cloud is a one-stop portal that allows scholars to access their collections and execute a number of analyses.

Accomplished:

- Launched in 2018
- Operationalized FEAV Cycle
- Develop GUI frontend; established connection to underlying Toolkit codebase
- Conducted analysis to understand the "Cost of a Warc"
- Analyzed just under a petabyte of data
- Designed and deployed analytics dashboard for monitoring
- Adopted by individuals from 59 unique institutions across 10 countries



ARCHIVES UNLEASHED CLOUD

Helping researchers and scholars access and analyze petabytes of historical internet content.

EST. 2018

912 TB Data Analyzed

1366 Collections

6503 Jobs Completed

235 Users

** Statistics as of June 10, 2020*

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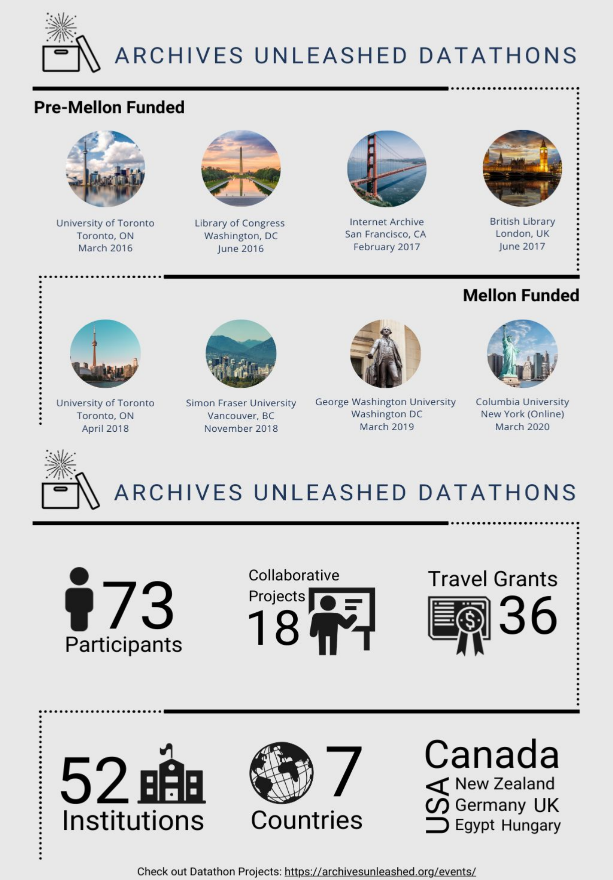
Deliverables - Host Regional Datathons

Datathons provided an opportunity to build community around Archives Unleashed tools, scholarly discussion, and training for scholars with limited technical expertise to explore archived web content.

Accomplished:

- ➔ Hosted **four** datathon events in North America:
  - ◆ 2018 Toronto
  - ◆ 2018 Vancouver
  - ◆ 2019 Washington, DC
  - ◆ 2020 New York (Online due to COVID-19)
- ➔ Collaborated with hosting institutions to provide increased access to web archive datasets
- ➔ Inspired continued research collaborations



ARCHIVES UNLEASHED DATATHONS

Pre-Mellon Funded

University of Toronto
Toronto, ON
March 2016

Library of Congress
Washington, DC
June 2016

Internet Archive
San Francisco, CA
February 2017

British Library
London, UK
June 2017

Mellon Funded

University of Toronto
Toronto, ON
April 2018

Simon Fraser University
Vancouver, BC
November 2018

George Washington University
Washington DC
March 2019

Columbia University
New York (Online)
March 2020

ARCHIVES UNLEASHED DATATHONS

73 Participants

Collaborative Projects 18

Travel Grants 36

52 Institutions

7 Countries

Canada
USA
New Zealand
Germany UK
Egypt Hungary

Check out Datathon Projects: https://archivesunleashed.org/events/

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Additional Outcomes

Notebooks

The project has produced several notebooks, which offer methods for exploring and visualizing web archive derivatives created through by Toolkit. This approach offers interoperability between Archives Unleashed outputs and external tools such as Jupyter Notebooks and Google Colab.

Learning Resources

Resources have been created to support, encourage, empower and instil confidence in scholars approaching new tools and methods to explore web archives.

- **7 Learning guides** on how to use and explore derivatives: network, web page text, and domain files.
- 35 Datasets via the Web Archives for Historical Research Group on Zenodo and Dataverse.

The Archives Unleashed Project

Final Thoughts

With the support of our community, the Archives Unleashed Team has been able to achieve our initial goals.

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