

The Open Digital Archaeology Textbook Environment

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Chapter 1

Forward

Digital archaeology as a field rests upon the creative use of primarily open-source and/or open-access materials to archive, reuse, visualize, analyze and communicate archaeological data. This reliance on open-source and open-access is a political stance that emerges in opposition to archaeology's past complicity in colonial enterprises and scholarship; digital archaeology resists the digital neo-colonialism of Google, Facebook, and similar tech giants that typically promote disciplinary silos and closed data repositories. Specifically, digital archaeology encourages innovative, reflective, and critical use of open access data and the development of digital tools that facilitate linkages and analysis across varied digital sources.

To that end, this document you are reading is integrated with a cloud-based digital exploratory laboratory of multiple cloud-computing tools with teaching materials that instructors will be able to use 'out-of-the-box' with a single click, or to remix as circumstances dictate. Part of our inspiration comes from the 'DHBox' project from CUNY (City University of New York, [link](#)), a project that is creating a 'digital humanities laboratory' in the cloud. While the tools of the digital humanities are congruent with those of digital archaeology, they are typically configured to work with texts rather than material culture in which archaeologists specialise. The second inspiration is the open-access guide 'The Programming Historian', which is a series of how-tos and tutorials ([link](#)) pitched at historians confronting digital sources for the first time. A key challenge scholars face in carrying out novel digital analysis is how to install or configure software; each 'Programming Historian' tutorial therefore explains in length and in detail how to configure software. The present e-textbook merges the best of both approaches to create a singular experience for instructors and students: a one-click digital laboratory approach, where installation of materials is not an issue, and with carefully designed tutorials and lessons on theory and practice in digital archaeology.

1.1 How to use this text

yadda

1.2 How to contribute changes, or make your own version

bigglybeep

1.3 How to access and use the computational environment

[link to site, instructions, also repo, also dhbox-on-a-stick](#)

1.4 Colophon

how this site was made

Chapter 2

Introduction: Why Digital Archaeology?

blah blah blah

Chapter 3

Part One: Going Digital

In this section, blah blah blah.

3.0.1 discussion

3.0.2 exercises

Chapter 4

Project management basics

blah

4.1 Github & Version control

blah ### discussion

4.1.1 exercises

4.2 Failing Productively

blah

4.2.1 discussion

4.2.2 exercises

4.3 Open Notebook Research & Scholarly Communication

blah

4.3.1 discussion

4.3.2 exercises

Chapter 5

The Ethics of Big Data in Archaeology

Ethics! Lots of Ethics!

5.0.1 discussion

5.0.2 exercises

Chapter 6

Introduction to Digital Libraries, Archives & Repositories

yadda

6.1 Command Line Methods for Working with APIs

yadda

6.2 Working with Open Context

yadda

6.3 Working with Omeka

yadda

6.4 Working with tDAR

yadda

6.5 Working with ADS

yadda

Chapter 7

Part Two: Making Data Useful

blah blah introd

Chapter 8

Designing Data Collection

yada yada

8.0.1 discussion

8.0.2 exercises

Chapter 9

Cleaning Data with Open Refine

blahde blah blah

9.0.1 discussion

9.0.2 exercises

Chapter 10

Linked Open Data and Data Publishing

yargble blarble floss

10.0.1 discussion

10.0.2 exercises

Chapter 11

Part Three: Finding and Communicating the Compelling Story

blah blah blah

Chapter 12

Statistical Computing with R and Python Notebooks; Reproducible code

blah ### discussion

12.0.1 exercises

Chapter 13

D3, Processing, and Data Driven Documents

blerg ### discussion

13.0.1 exercises

Chapter 14

Storytelling and the Archaeological CMS: Omeka, Kora

blargle

Chapter 15

Web Mapping with Leaflet

...I wonder if we should talk about GIS & Pandas, etc... or in R?

15.0.1 discussion

15.0.2 exercises

Chapter 16

Place-based Interpretation with Locative Augmented Reality

yep.

16.0.1 discussion

16.0.2 exercises

Chapter 17

Archaeogaming and Virtual Archaeology

yay archaeogaming

17.0.1 discussion

17.0.2 exercises

Chapter 18

Social media as Public Engagement & Scholarly Communication in Archaeology

boo socmed

18.0.1 discussion

18.0.2 exercises

Chapter 19

Part Four: Eliding the Digital and the Physical

crazytown

Chapter 20

3D Photogrammetry & Structure from Motion

vsfm

20.0.1 discussion

20.0.2 exercises

Chapter 21

3D Printing, the Internet of Things and “Maker” Archaeology

yay ### discussion

21.0.1 exercises

Chapter 22

Artificial Intelligence in Digital Archaeology

22.1 agent models

blah

22.1.1 discussion

blah

22.1.2 exercises

blah

22.2 machine learning for image captioning and other classificatory tasks

blah

22.2.1 discussion

blah ### exercises

Chapter 23

Part Five: Digital Archaeology's Place in the World

blerg

Chapter 24

Marketing Digital Archaeology

blog ### discussion

24.0.1 exercises

Chapter 25

Sustainability & Power in Digital Archaeology

the big ticket item.

25.0.1 discussion

25.0.2 exercises