Outline

1. LSC 653: Data on the Web - API Literacy for LIS Students
   - Background of the course
   - Curriculum
   - Results + lessons learned

2. Data on the Web - API Literacy for Librarians
   - 4 reasons why librarians should know + use APIs
Background

- Catholic University - Department of Library and Information Science; awards MSLIS degree
- 10 tracks, or “Courses of Study”
- New track: Data Science
  - Electives include Data Visualization, E-Science, Database Management
- New course to “emphasize Javascript, XML, and APIs”

The Catholic University of America
Data on the Web

API Literacy for LIS Students

- Understanding the HTML DOM, XML, and JSON
- Using JavaScript to manipulate/analyze/extract data in HTML/XML/JSON
- Additional lessons on web mining and IIIF Framework
- Blend of lecture and workshop-style exercises
- Guest speakers:
  - Electronic Services Librarian from University of Houston
  - Project Archivist from Rutgers University
  - Knowledge Manager from U.S. Department of Defense
Course Requirements

- Pre-requisite: LSC 555 (includes HTML)
- No (add’l) purchase necessary
- Readings
  - Textbook: Eloquent JavaScript, 3rd Ed.
    - eloquentjavascript.net
  - Case studies, articles, blog posts, etc.
- 10 Weekly Homework Exercises
- Presentation
- Final Project: interactive webpage parsing REST API data
Results

Final Project examples:

- Explore ship data from U.S. National Archives
- Patent Data Explorer
- Library Catalog / NYT Book Review integration
Results + Lessons Learned

- No working around pre-requisite
- HTML basic instruction somewhat inadequate
  - Need to understand divs, IDs, and classes
- Pros and Cons to Using JS
  - Pros: not as much software to install, easy to get started
  - Cons: APIs with CORS restrictions, AJAX syntax is complicated to teach
- Limited/niche interest from students
Data on the Web API Literacy for Librarians

Four Ways API Literacy can Help Librarians

1. Web Development / Website Widgets
2. Public Services + Public Accountability
3. Connect with External Collections
4. Archiving the Web + Social Media
1. Web Dev / Website Widgets

Examples:

- Twitter
- Instagram
- LibGuides
  - A-Z Database List
  - Library Hours
- Blog feed
- Book availability from Alma API
2. Public Services + Public Accountability

APIs:

- Public Transportation (WMATA)
- Public Legislation (Congress.gov, ProPublica, GovTrack, OpenCongress)
- U.S. Census Bureau Data
- Local: DC government aerial images, property records, etc.
3. Connect with External Collections

Examples:

- Library of Congress
  - General Collection
  - Prints & Photographs
  - Chronicling America
- DPLA
  - Sample: see right ->
- IIIF Framework

http://omeka.chrc-phila.org/items/show/6865
https://github.com/cscottjames/dpla-api
4. Web + Social Media Archiving

- Facebook data
- Twitter datasets
  - Littman, et. al. (2018). “API-based social media collecting as a form of web archiving”
    https://doi.org/10.1007/s00799-016-0201-7
- Web scraping: same principles and technologies can be used to capture rendered HTML code

An American robin, a bird that actually tweets, at Reifel Bird Sanctuary, Westham Island, B.C.

By Tony Y.H. Tong.
https://www.flickr.com/photos/tonytong/3094490825
Thank You

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