Analog Records to Relational Databases

Laying the Foundation for Computational Storytelling with Antebellum Maryland records

BPE Conference, #BPE2019
April 30, 2019, Session S08
Study of the Legacy of Slavery in Maryland Research Project

- Grant-funded program since 2001
- Preserve and promote Maryland’s African American experience, 1634-present
- Utilize archival holdings to highlight individuals
- Record mining
- University of Maryland iSchool DCIC collaboration in 2017
African American Resources

Census of Negroes

Slave Statistics

Manumissions

Runaway Advertisements
Repurposing Chattel Inventories Accounts of Sale
Repurposing

Chattel

Inventories

Accounts of Sale
## The Process

<table>
<thead>
<tr>
<th>Date</th>
<th>Witness/Testimony</th>
<th>S/F B First Name</th>
<th>S/F B Last Name</th>
<th>Gender</th>
<th>Age</th>
<th>Height</th>
<th>Complexion</th>
<th>Scars</th>
<th>Alias</th>
<th>Status prior: Slave</th>
<th>Owner First</th>
<th>Owner Last</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>18070808</td>
<td>Nicholas Hanwood</td>
<td>Elizabeth</td>
<td>Reynolds</td>
<td>Female</td>
<td>24</td>
<td>5'2&quot;</td>
<td>Mulatto, nearly</td>
<td>Scar on right side of Elizabeth head</td>
<td>Slave</td>
<td>Raised in Annapolis</td>
<td>William Reynolds</td>
<td>Reynolds</td>
<td>manumitted E</td>
</tr>
<tr>
<td>18070733</td>
<td>Jason</td>
<td>Male</td>
<td></td>
<td>Male</td>
<td>18</td>
<td>5'6&quot;</td>
<td>Black</td>
<td>Scar on left arm, from a burn</td>
<td>Free born</td>
<td>Raised in Anne Arundel County</td>
<td>Raised in Anne Arundel County</td>
<td>Jenkins</td>
<td></td>
</tr>
<tr>
<td>18070724</td>
<td>James</td>
<td>Brogden</td>
<td>Male</td>
<td>Male</td>
<td>23</td>
<td>5'8&quot;</td>
<td>Black</td>
<td>Scar on back of his head</td>
<td>Free born</td>
<td>Born in Prince George's County</td>
<td>Born in the city of Annapolis,</td>
<td>Jenkins</td>
<td></td>
</tr>
<tr>
<td>18070728</td>
<td>Hannah</td>
<td>Male</td>
<td></td>
<td>Female</td>
<td>40</td>
<td>5'4&quot;</td>
<td>Dark</td>
<td></td>
<td>Free born</td>
<td>Fore finger on the right hand is</td>
<td>Raised in Anne Arundel County</td>
<td>Jenkins</td>
<td></td>
</tr>
<tr>
<td>18070803</td>
<td>Ann</td>
<td>Toogood</td>
<td>Female</td>
<td>Female</td>
<td>53</td>
<td>5'2&quot;</td>
<td>Yellowish</td>
<td></td>
<td>Free born</td>
<td>Has one tooth out of the right side</td>
<td>Raised in Anne Arundel County</td>
<td>Jenkins</td>
<td></td>
</tr>
<tr>
<td>18070804</td>
<td>Thomas</td>
<td>Queen</td>
<td>Male</td>
<td>Male</td>
<td>34</td>
<td>5'8&quot;</td>
<td>Yellowish</td>
<td></td>
<td>Free born</td>
<td></td>
<td>Raised in Anne Arundel County</td>
<td>Jenkins</td>
<td></td>
</tr>
<tr>
<td>18070806</td>
<td>Rachel</td>
<td>Allan</td>
<td>Female</td>
<td>Female</td>
<td>19</td>
<td>5'3.5&quot;</td>
<td>Yellowish</td>
<td></td>
<td>Free born</td>
<td></td>
<td>Raised in Anne Arundel County</td>
<td>Jenkins</td>
<td></td>
</tr>
<tr>
<td>18070807</td>
<td>Sall</td>
<td>Female</td>
<td></td>
<td>Female</td>
<td>52</td>
<td>5&quot;</td>
<td>Yellowish</td>
<td></td>
<td>Free born</td>
<td></td>
<td>Raised in Anne Arundel County</td>
<td>Jenkins</td>
<td></td>
</tr>
</tbody>
</table>
**Data Mining**

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**Fugitive Slave Data**

<table>
<thead>
<tr>
<th>Name</th>
<th>Race</th>
<th>FUG_Year</th>
<th>FUG_Last</th>
<th>FUG_Gender</th>
<th>FUG_Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amanda</td>
<td>White</td>
<td>F</td>
<td>Butler</td>
<td>F</td>
<td>25</td>
</tr>
<tr>
<td>Ann</td>
<td></td>
<td></td>
<td>Myers</td>
<td>F</td>
<td>22</td>
</tr>
<tr>
<td>Benjamin</td>
<td>Howard</td>
<td>1815</td>
<td></td>
<td>M</td>
<td>25</td>
</tr>
<tr>
<td>Bill</td>
<td>Banks</td>
<td>F</td>
<td>Hammond</td>
<td>M</td>
<td>21</td>
</tr>
<tr>
<td>Bill</td>
<td></td>
<td></td>
<td>Butcher</td>
<td>M</td>
<td>16</td>
</tr>
<tr>
<td>Bob</td>
<td>Manica</td>
<td>M</td>
<td></td>
<td>M</td>
<td>23</td>
</tr>
<tr>
<td>Charles</td>
<td>Dyson</td>
<td>M</td>
<td></td>
<td>M</td>
<td>23</td>
</tr>
</tbody>
</table>

---

**Slave Owner Data**

<table>
<thead>
<tr>
<th>OW_First</th>
<th>OW_Middle</th>
<th>OW_Last</th>
<th>OW_State</th>
<th>OW_County</th>
<th>OW_Locale</th>
</tr>
</thead>
<tbody>
<tr>
<td>James</td>
<td>Porter</td>
<td>Miller</td>
<td>Maryland</td>
<td>Baltimore</td>
<td>Back River Neck</td>
</tr>
<tr>
<td>John</td>
<td>Thornton</td>
<td>John</td>
<td>Georgia</td>
<td>Oglesboro</td>
<td></td>
</tr>
<tr>
<td>Nicholas</td>
<td>M. Asbury</td>
<td>Nicholas</td>
<td>Maryland</td>
<td>Baltimore</td>
<td>Dorascoke Neck</td>
</tr>
<tr>
<td>Mary</td>
<td>Martin</td>
<td>Allen</td>
<td>Maryland</td>
<td>Baltimore</td>
<td>City Block</td>
</tr>
<tr>
<td>Maria</td>
<td>Wright</td>
<td>E. C.</td>
<td>Maryland</td>
<td>Baltimore</td>
<td>Lombard and Paca</td>
</tr>
<tr>
<td>James</td>
<td>Maxwell</td>
<td>Osborn</td>
<td>Maryland</td>
<td>Harford</td>
<td>Good Luck</td>
</tr>
</tbody>
</table>

*Fugitive DOB calculated by subtracting age from the date*
Workflow

Newspapers → Scanned Documents → Datafication & Transcription Process → Data Cleaning Process → Data Store

Runaway Slave Ads
The Problem

- Conveyances.xls
- Database Properties.xls
- DEEPLIBERFOLIO2.xls
- DeedsLotNumbers.xls
- InventoryWills.xls
- INVENTORYDEEDS.xls
- London Town Lots.xls
- NameLink.xls
- Names.xls
- Probate Inventory All Sites.xls
- ProbateNameLink.xls
- Probate.xls
- PropertyLink.xls

- 1798TaxAACo.db1.mdb
- AACo.OrdinaryKeepers.mdb
- birthdeathmarriage.mdb
- BobsCourtData.mdb
- CourtJudgements.mdb
- CourtJudgements2.mdb
- FerryBoats.mdb
- Hancock.mdb
- Interns.mdb
- Interns_V8.mdb
- MarylandGazette.mdb
- ships.mdb
- TavernLaw.mdb

- 1810CENS1.xls
- 1820CENS1.xls
- 1830CENS1.xls
- 1840CENS1.xls
- 1850_census_population.xls
- 1850CENS1.xls
- 1860_census_population.xls
- 1860CENS1.xls
- 1860censuspop_new.xls

- Excel for Runaways, Domestic Traffic Ads.xls

- 1850_1860_slave_schedules.xls
- 1860_census_population.xls

- cases.mdb
- inventory.mdb
- slaveowners.mdb
mdslavery.exe data tool
slavery.msa.maryland.gov database
slavery.msa.maryland.gov database

### Certificates Of Freedom

**Record Type: Total Results**
- Accomodations Dockett: 2
- Assessments: 1
- Assessment Slaves: 1
- Census 1830: 19
- Census 1840: 10
- Census 1850 1860: 174
- Census 1870 1880: 211
- Certificates Of Freedom: 136

**Certificates Of Freedom**

Filter By:
- Age
- Showing only:

View:
- List
- Detailed

<table>
<thead>
<tr>
<th>Age</th>
<th>County</th>
<th>Date</th>
<th>Freed Firstname</th>
<th>Freed Lastname</th>
<th>Owner Firstname</th>
<th>Owner Lastname</th>
<th>Prior Status</th>
<th>Sex</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.00</td>
<td>Anne Arundel</td>
<td>1849-11-13</td>
<td>William H.</td>
<td>Butler</td>
<td>Rezin H.</td>
<td>Snowden</td>
<td>slave</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>15.00</td>
<td>Baltimore City</td>
<td>1832-06-01</td>
<td>Henrietta</td>
<td>Snowden</td>
<td></td>
<td></td>
<td>Free born</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>16.00</td>
<td>Anne Arundel</td>
<td>1846-03-24</td>
<td>Sarah</td>
<td>Lane</td>
<td>Rezin H.</td>
<td>Snowden</td>
<td>slave</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>18.00</td>
<td>Baltimore City</td>
<td>1832-05-30</td>
<td>Caleb</td>
<td>Snowden</td>
<td></td>
<td></td>
<td>Free born</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>18.00</td>
<td>Prince George's</td>
<td>1821-06-07</td>
<td>Henry</td>
<td>Lox</td>
<td>Anne</td>
<td>Snowden</td>
<td>Slave</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>19.00</td>
<td>Prince George's</td>
<td>1822-09-04</td>
<td>Margaret</td>
<td>Smith</td>
<td>Anne</td>
<td>Snowden</td>
<td>Slave</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>19.00</td>
<td>Anne Arundel</td>
<td>1856-04-23</td>
<td>Mary Eliza</td>
<td>Snowden</td>
<td></td>
<td></td>
<td>Free born</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>19.00</td>
<td>Anne Arundel</td>
<td>1841-05-04</td>
<td>Charlotte</td>
<td>Snowden</td>
<td></td>
<td></td>
<td>Free born</td>
<td>M</td>
<td>Details</td>
</tr>
<tr>
<td>19.00</td>
<td>Baltimore City</td>
<td>1832-05-21</td>
<td>Martha</td>
<td>Snowden</td>
<td></td>
<td></td>
<td>Free born</td>
<td>M</td>
<td>Details</td>
</tr>
</tbody>
</table>
UMD DCIC Project Poster

Legacy of Slavery in Maryland: From document to database, uncovering untold stories
A Maryland State Archives' program, in collaboration with the DCIC

How can we use graph databases to visualize connected data from the Maryland State Archive's Legacy of Slavery collections?

Data Flow Pipeline

MSA's Legacy of Slavery Program's Historical collections

Conclusions, Challenges, and Future Research:
- Data needs to be meticulously cleaned and normalized. Variability and idenfication of misses connections through empty nodes in graph approach.
- Power of graph databases is in combining collections to find new relationships, how can we design scheme that accommodates multiple collections.

Challenges and Considerations:
- Original document may be damaged, discolored, folded, or otherwise difficult to read.
- Quality of digitized image varies.
- Subject matter expertise may be required to discern important contextual information (i.e., places, jobs, dates, abbreviations that may not be self-explanatory to the general public).
- The Maryland State Archive's data model robust enough to account for future technologies and evolving use.

Robert Bowie
- In his email, we see that Bowie has over 35 entries out of 74 newspaper ads.
- Why so many advertisements?
- He was particularly fond of one ad.
- Or did he just own a large number of slaves?
**UMD DCIC Project Poster**

**Legacy of Slavery: Data Curation toward Discovery**

**About this project:**
- In partnership with the Maryland State Archives, DCIC students:
  - Transcribe digitized archival records about the history of slavery in Maryland, including census records and certificates of freedom.
  - Curate the data on the population of early Maryland, actively learning how archival records become data for computational analysis.
  - Analyze and visualize historical data while helping promote public access to vital archival records.

**Phase 1: Transcription and data curation**

Challenges:
- Interpreting handwritten, semi-structured text into structured data
- Deciding how to represent unknown or insufficiently recorded information
- Deciding how to translate human-readable text into machine-readable data
- Selecting data representation choices that present historical context
- Combining different artifacts from the transcription workflow into a unified dataset
- Determining most effective data processing and data operations
- Collaborating together open-source tools

**Phase 2: Preliminary analysis**

**Reflecting on the challenge of curation data about enslaved people:**
- "...the whole process was much more straightforward and required greater reflection than I had been transcribing more innocuous data."
  - Bench

- "Entering this hope of data into a spreadsheet, reducing individuals in this way to gross physical characteristics, felt like a modernization of the dehumanization process that these individuals underwent in their lives. However, I also understand why these spreadsheets are necessary..." - Bench

- "While some individuals were manumitted years (even decades) prior, some had their manumission recorded as that exact same date. It was amazing to me that what I was reading, what I was witnessing centuries later, was this person's first day of freedom." - Tubby

http://dcicblog.umd.edu/legacyofslaveryinmaryland/