

Lencia Carice Beltran

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EDUCATION

2020 M.S. Library and Information Science, specialization in Archival Studies, School of Library and Information Science, Emporia State University

2018 B.A. Linguistics, University of Kansas

2018 B.A. Speech, Language, and Hearing, University of Kansas

TECHNICAL & DIGITAL SKILLS

Collaborative Tools: Jupyter Lab/Notebook, OSF, GitHub

Programming Languages: Intermediate Python, Command Line Interface/Terminal, XML, HTML, CSS and Javascript, JSON, Markup

Metadata Standards/Schemas: DublinCore, EAD, DACS, PREMIS, PBcore/VRAcore, AACR2, MARC21

Software & Systems: Omeka, ArchivesSpace, Quartext, OpenRefine; Protege, WordPress, Neo4J (Graph Database), PRAAT, Audacity, Noldus ObserverXT, Drupal, foundational knowledge of MySQL/SQLite, MongoDB (NoSQL)

Professional Appointments

Carnegie Mellon University

2022 – Current ***Open Science Program Coordinator***

University Libraries, Open Science Program

- Certified Software and Data Carpentries Instructor; earned September 2022.
- Develop and teach instructional workshops on: UNIX/Bash CLIcommand, Git/Github, basic data science practices in Python and Python libraries, and documentation practices.
- Head Project Manager; provide strategic direction for CMU Libraries' Data & Code Support services; develop, support, and implement data & code programming, training, and consultation services for the CMU community.
- Supervise Graduate Students and coordinate full-time professional staff/consultants for Data & Code support services and resources.
- Lead, develop, and implement Open Science programming/events and training, including conducting assessments to continually evaluate the adoption and impact of open science practices, not only at CMU but also on a broader level.
- Head PI and Co-PI of federal and locally funded collaborative research (for more information please see "Research Projects" below)
- Ideate, curate, and write content for the University Libraries Open Science Newsletter.

University of North Carolina, Wilmington

2021 - 2022 ***Special Collections Archivist & Diversity Resident Librarian***

Center for Southeast North Carolina Archives and History, Special Collections

- Processed, preserved, and created Encoded Archival Description finding aids for special collections.
- Planned, collaborated on, and created exhibits for Black History Month.
- Developed and implemented a digitization & data project for a special collection about the 1898 Wilmington Coup.

- Provided reference services to university students, faculty, staff, and patrons.
- Library Liaison for the University Faculty Diversity, Equity, and Inclusion Committee.
- Implemented a deselection & digitization plan for the Randall Library print and microfiche collection.
- Participated in professional development activities: *Academy of Certified Archivist, Digital Archives Specialist, Federal Reserve Bank of St. Louis Data Literacy course.*

University of Texas at Austin, School of Information

2022 – 2022 *IDEA Institute on AI Fellow*

Institute of Museum and Library Services (IMLS) Funded

- Formulated, designed and presented a project management plan for the implementation of an AI project to increase usage of CMU Libraries Open Science Program resources and tools.
- Participated in a 3-week AI course on topics like challenges and ethics; project planning; data collection, evaluation, and training; and linked open data.

University of Maryland, College of Information Studies

2021 – 2022 *AIC Research Fellow*

Advanced Information Collaboratory (AIC)

- Cleaned, manipulated and carried out an exploratory analysis using OpenRefine and Pandas on large scale datasets relating to the incarceration of Japanese Americans during WWII.
- Created spatial network visualizations using Plotly and NetworkX.
- Manipulated large datasets to include geospatial data to visually represent spatial networks and displacements of Japanese Americans.
- Experimented with geocoding APIs, GIS software & open source tools to create point maps, choropleth, cluster, proportional, and flow maps (Plotly, Folium, QGIS, ArcGIS)
- Published an online Jupyter Notebook on Spatial Analysis of incarcerated Japanese Americans.
- Managed documentation and metadata entry.
- Collaborated with Faculty mentors, LEADS fellows and external community stakeholders.
- Presented research at IEEE Big Data Conference; Coalition of Networked Information (CNI) in D.C.; and the Society of American Archivists (SAA) in Boston, MA.
- Published and contributed to *Archival Outlook!* in the July/August issue.

Drexel University, College of Computing & Informatics

2021 – 2021 *LIS Education and Data Science Fellow*

Institute of Museum and Library Services (IMLS) Funded

- Participated in a 3-week AI course and learned large scale data management, cleaning and processing, integration, and modeling; text processing, mining, and search; ontologies and metadata, linked data, supervised and unsupervised learning; deep learning, ML & AI (Keras, Scikit-Sklearn); graph & network models; large scale data intensive computing, visual analytics and human-centered data science.
- Attended and presented AIC research project updates to external stakeholders at monthly Big-Data Hub meetings.

Kansas Historical Society

2019 – 2021 *Digital Project Archivist*

Archives Division

- Performed quality assurance and resolved errors for incoming digital assets.
- Reconciled and linked (meta)data to relevant external data repositories in Kansas Memory (in-house repository).
- Applied DublinCore, DACS, and AACR2 metadata standards to create unique descriptions for digitized assets following conventional and non-conventional guidelines.

- Created and applied hierarchical faceted metadata to digital records and increased the discoverability of digital content (i.e., metatags).
- Provided regularly scheduled progress reports to senior leadership.
- Attended weekly Archives Division meetings and provided regular oral reports.

Kansas City Art Institute

2020 - 2020 *Research Intern*

Missouri Remembers Project

- Researched, collected, and synthesized data of artists active in the State of Missouri during the 1820 – 1950s into a collaborative document.
- Applied and developed descriptive metadata & biographical essays on artists.
- Applied controlled vocabularies and to create authority records (LCSH, LCTGM, LCNAF).
- Mapped metadata elements into a cloud based service.

University of Kansas

2018 - 2019 *Research Assistant*

Fragile X lab

- Managed and updated qualitative and quantitative databases for longitudinal human behavioral research.
- Managed and updated lab protocols and coding manuals to improve existing qualitative processes.
- Processed and curated audio and video recorded mother-child interactions in Audacity and Noldus ObserverXT.
- Transcribed, coded, and analyzed individual behaviors, facial expressions, and gestures of audio and video-recorded mother-child interactions in Noldus.
- Explained and administered standardized tests and protocols to adolescents with fragile X syndrome.
- Scored standardized tests of language, cognition, and adaptive behaviors.
- Wrote and mailed reports to families regarding child/adolescent scores obtained on standardized tests.
- Attended monthly lab meetings with faculty and graduate students of the lab to discuss the progress of ongoing projects.

University of Kansas

2017 – 2018 Research Assistant

Speech, Language, Cognition lab

- Assisted with the development of protocols to measure characteristics of stop consonants and vowels within the Praat software.
- Measured speech patterns from multiple speakers from different language backgrounds to discover potential phonemic convergence.

PROFESSIONAL AWARDS

2023 North Carolina State Data Science Academy and **NC State Libraries Fellow**

2022 Institute of Museum and Library Services (IMLS), UT Austin: **IDEA Institute on AI 2021 Fellow**
2021 University of Maryland, Advanced Information Collaboratory: **AIC Research Fellow**
2021 Institute of Museum and Library Services (IMLS), Drexel University: **LEADING Fellow**

2021 IEEE Big Data, National Science Foundation, **Travel Scholarship**
2021 Mid-Atlantic Archives Conference, **Travel Scholarship**
2020 Kansas City Area Archivist, **Travel Scholarship**
2020 **Martha Furber Library Scholarship**, GPA 3.5 higher

FUNDED RESEARCH PROJECTS & ACTIVITIES

2023-2025 Head PI, Simon Seed Initiative Grant **“AI for Open Science”**; \$10K, Aug. 2023 - May 2025.
2023-2025 Co-PI, Institute of Museum and Library Services (IMLS), **“Open Science Primer”**,
RE-254818-OLS-23; \$241K, Aug. 2023 - Aug. 2025.
2023-2024 Co-PI, Ithaka S+R, **“Building Campus Strategies for Coordinated Data Support”**; Jan. 2023
- Mar. 2025.
2023-2024 Co-Editor, ACRL Cookbook, **“Open Science Cookbook”**; Jan. 2023 - Aug. 2024.
2021-2022 Research Collaborator, Institute of Museum and Library Services (IMLS), **“CT-LASER+:**
Piloting an Online Collaborative Network for Integrating Computational Thinking into
Library and Archival (Science) Education (Research) & Practice”, RE-246334-OLS-20:
\$300K, Aug. 2020 - Jul. 2022.

PUBLICATIONS

1. Maimone, C., Sharp, J., Schwartz-Soicher, O., Coliver, J., and **Beltran, L.** (Under Review) *Do good: Strategies for Leading an Inclusive Data Science or Statistics Consulting Team*. Stat. Submitted Feb 2024
2. **Beltran, L.**, Griego C., Herckis L. (2023) *Open Science Recommendation Systems for Academic Libraries*. Journal of eScience Librarianship, Responsible AI special issue. Submitted Oct. 2023 and accepted.
3. **Beltran, L.**, Ping O’Brien, E., and Jansen, G.(2023) *Developing a Framework for Unlocking and Linking WWII Japanese American Incarceration Biographical Data*, Invited Submission to the 2023 July/August Society of American Archivist, Archival Outlook! Accepted June 2023.
4. **Beltran, L.**, Griego, C., and Herckis, L. (2023) *Open Science Recommendation Systems for Academic Libraries*, IMLS-funded “Responsible AI” case studies. Submitted Jan. 2023 and accepted.
5. **Beltran, L.**, (2023) *“Thin Skinned,” Unappreciated, and Overworked: Experiences and Impacts of Microaggressions in the Fields of Galleries, Libraries, Archives, and Museums!* Library Juice Press, Submitted May 2023
6. **Beltran, L.**, Ping O’Brien, E., Jansen, G. and Marciano, R. (2021) *Developing a Framework for Unlocking and Linking WWII Japanese American Incarceration Biographical Data*, Submitted to the 2021 IEEE Big Data Conference 6th “Computational Archival Science (CAS)” Workshop. Submitted Oct. 2021 and accepted.

PROFESSIONAL CONFERENCES

- Gainey, M., **Beltran, L.**, Bongiovanni, E. (2023) "*The Creation and Evolution of a Dedicated Open Science Program*". All Things Open. Virtual presentation.
- **Beltran, L.**, Griego, C., Herckis, L. (2023) "*AI Enabled Open Science Recommendation System for Improving Education at Carnegie Mellon University*", . WPWVC-ACRL Spring Conference 2023, presentation at WVU-Potomac State.
- **Beltran, L.** & Griego, C. (2023) "*The Creation and Evolution of a Dedicated Open Science Program*". WPWVC-ACRL Spring Conference 2023, poster session presentation at WVU-Potomac State.
- **Beltran, L.** et al. (2023). *Crafting a community response to the 2023 OSTP ("Nelson") Memo*. Association of College and Research Libraries, Roundtable Discussion.
- **Beltran, L.**, O'Brien, E., Jansen, G. (2022). *Giving Data Back to the Community through Computational Scholarship: Three Case Studies focused on Japanese American Incarceration Records from World War*. Presentation on Aug. 25,, 2021 at ***Society of American Archivist, ARCHIVES*RECORDS 2022***, Incubator Session.
 - See: <https://archives2022.us2.pathable.com/meetings/HSStHr7eWnjpfNfAE>
- Greenberg, J., **Beltran, L.**, O'Brien, E., et al. (2021). *LEADING to Data Science in Libraries*. Presentation on Dec. 13, 2021 at ***Coalition for Networked Information (CNI), Invited Session***.
 - See: <https://www.cni.org/events/membership-meetings/past-meetings/fall-2021/plenary-sessions-f21>
- Marciano, R., **Beltran, L.**, O'Brien, E., Jansen, G. (2021). *Automating the review of personally identifiable information (PII) in Japanese American WWII Incarceration Camp records*. Presentation on Sep. 16, 2021 at "Unlocking our Digital Past: the role of AI in the review of and access to digital archival materials.", Workshop
 - See: <https://unlockingourdigitalpast.com/2021/09/21/professor-richard-marciano-automating-the-review-of-personally-identifiable-information-pii-in-japanese-american-wwii-incarceration-camp-records-unlocking-our-digital-past-workshop/>
- **Beltran, L.** (2020). *An examination of the teaching methods used for information literacy instruction by librarians to high school students*. Poster session presentation, Emporia State University

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