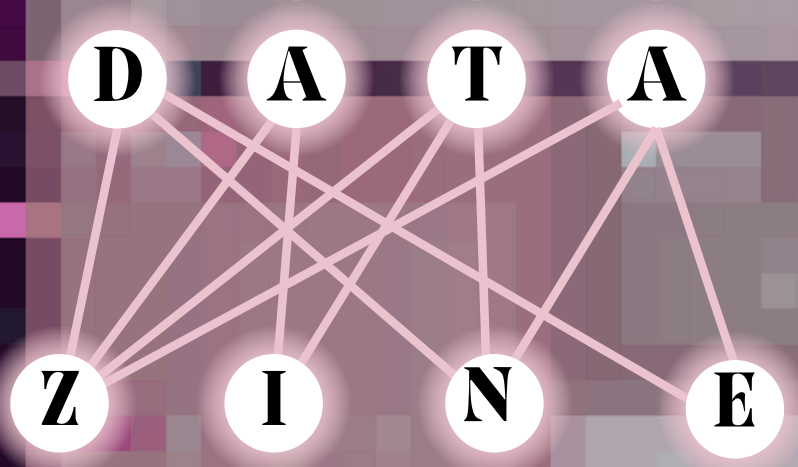
Connolly Alexander Institute For Data Science



Issue 7 | 2023-2024

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MESSAGE FROM THE EDITOR

"I am so proud of the hard work and dedication that our interns, peer mentors, and ambassadors have accomplished in this first-year of rolling out new and robust data-related student programs. It has been truly inspiring to see this group of students actively brainstorm, collaborate, solve problems, develop projects and skills, research, share knowledge, and build caring and mutually supportive communities around data literacy education, data research, and science communication across campus and the community."

Sincerely,
Dr. Jacquelyne Thoni Howard

ABOUT THE LAB

At the Connolly Alexander Institute for Data Science (CAIDS), we work with undergraduate and graduate students to shape the data literacy landscape at Tulane University. Our Data Lab students build supportive interdisciplinary equity-minded data communities for undergraduate and graduate students at Tulane University through scholarship, collaboration, mentorship, and networking. Our Data Lab community makes data work accessible and relevant for technical and non-technical majors and fields. Our Data Lab community explores and applies data equity frameworks to build enriching data communities based on mutual support (e.g., anti-racist, queer, feminist, social justice pedagogies and epistemologies).

Students become makers of open-sourced technical and scholarly knowledge about data by producing science communication materials, project deliverables, product reviews, project manuals, and scholarship.

We are so grateful to Newcomb Institute, especially Anita Raj and Laura Wolford, for partnering with CAIDS to co-support the Data Research Internship program through grant support. Support from Newcomb Institute has enabled eight students to work with and actively contribute to the data research of Tulane faculty, graduate students, staff, and community partners. We look forward to continuing this partnership between Newcomb Institute and CAIDS!

2024

CAIDS INTERNS

Data Research Interns

- Solve multi-disciplinary research questions using data research methods supported by equity frameworks.
- Work collaboratively as a team on a range of data research projects of Tulane faculty and community partners while building a portfolio of data and essential skills.
- Continually focus and reflect on building projects and relationships around data equity frameworks such as partnership and reciprocity, collaboration, leveraging resources, and agentic co-education.

2023-2024 Lab Interns

Wendy Yang (she/her)

Product Developer

Wendy Yang (she/her) is a senior majoring in Cell & Molecular Biology and Computer Science, with minors in Mathematics and Economics. Wendy's favorite part of working on the DRI team is collaborating with peers from diverse majors and specialties. Besides being a Product Developer for the DRI team, Wendy also works as a Clinical Research Assistant at Tulane Office of Health Research. Additionally, Wendy serves as the President for both the Tulane International Society (TIS) and Equity in Tech (EIT). In her free time, Wendy enjoys cooking, crafting, and playing board games.

Ifeoma Osakwe (she/her)

Product Developer

Ifeoma Osakwe (she/her) is a junior majoring in Cell and Molecular Biology. She is an international student from Nigeria. As well as a Product Developer, she is a Newcomb Scholar, a Green Wave Ambassador for the Office of Undergraduate Admission, and the Co-President of the Tulane African and Caribbean Student Association. She enjoys finding unexpected links between her academic interests, internships, and campus involvements and loves her positions at CAIDS because they allow her to explore such interdisciplinary curiosities. Outside of school and work, she likes to play board games, travel, and sing karaoke.

Emma De Leon (she/her)

Development Intern

Emma De Leon (she/her) is a junior studying communication and environmental studies with a minor in political science. Emma is also pursuing a GIS certificate and utilizes her mapping skills in her personal data project studying the increased burden of rising flood insurance costs on marginalized populations in Louisiana. She enjoys the collaborative nature of the DRI team and the social justice focus of its projects. Outside of the DRI team, Emma is the co-president of Tulane Women in Science, a member of the Sustainability and Divestment Committee, and a volunteer with the Food Recovery Network.

Sam DeMarinis (he/him)

Development Intern

Sam DeMarinis (he/him) is a junior majoring in Mathematics and Computer Science with minors in Psychology and Italian. He is from Morris Plains, New Jersey. In addition to being Technical Lead at CAIDS, he is on the executive board for Tulane's computer science club, Cookies & Code. He is also a member of the professional engineering fraternity, Theta Tau. Sam is interested in pursuing a career in software engineering and AI/ML. He spent the Spring 2024 semester in Florence, Italy, and hopes to return full-time after college.

Maggie Lai (she/her)

Development Intern

Maggie Lai (she/her) is a sophomore mathematics major interested in education, mathematics research, and developing technology. Towards these interests, Maggie is a co-founder of a STEM kit company, a fabrication technician, and the president of the Tulane Math Club. The DRI team has given her a chance to explore data's potential for connection—her personal project maps Chinese churches across the U.S. for easy location. As a Christian who's grown up in different churches, she hopes that this project will help people find the kind of community that she's been lucky to have.

Kailen Mitchell (she/her)

Development Intern

Kailen (she/her) is a Junior pursuing a B.S. in Mathematics and Computer Science with a minor in English. When she's not doing school or DRI work, she love creative writing, taking spin classes, and playing ultimate frisbee. Her personal data project focuses on the gender gap in the Data Science field since she's always felt passionate about feminism in tech. She loves the DRI team because it allows her to be a part of a feminist community while building her data skills.

Meghan Nagia (she/her)

Development Intern

Meghan Nagia (she/her) is a sophomore pursuing a B.S. in Exercise Science with a minor in Strategy, Leadership, and Analytics (SLAM) on the pre-med track. In addition to being a Digital Research Intern, she works as a student sports medicine assistant for Tulane Athletics, is co-president of the Tulane Kinesiology club, and on the board of the Indian Association at Tulane (IATU). She also enjoys working out, music, and exploring New Orleans with her friends. Meghan loves being on the DRI team because it allows her to hone her data skills and work on a diverse array projects.

Zoe Oboler (he/him)

Development Intern

Zoe Oboler is a junior majoring in Computer Science and Design. Zoe uses he/him pronouns and was born and raised in Washington D.C. In addition to being a digital research intern, Zoe is a member of Theta Tau, where he is the chair of the general majors committee. He enjoys finding ways to explore his interests in both the arts and sciences, and often works in the intersection between computer science and graphic design. Out of school he enjoys travel, embroidery, watercolor painting, and baking.

Data Ambassadors Council

- Collect information and provides feedback on the data needs (curriculum, programming, workshops, etc.) of undergraduate and graduate students at Tulane University.
- Work collaboratively as a focus group to brainstorm and solve problems around data programming.
- Produce science communication projects and products to openly share information across campus about CAIDS student programming and curriculum.

CAIDS Data Ambassador Council

Project Leaders: Bolívar Aponte Rolón and Jacquelyne Thoni Howard Ph.D

Overview

The Data Ambassador Council (DAC) is a diverse cohort of data equity advocates and a focal point of CAIDS student input and engagement

Contributions

- Created and distributed fliers, infographics, and swag advertising CAIDS and DATA courses.
- Used social media to advertise/recap CAIDS sponsored events.
- Collected emails for future outreach and newsletters.
- Strategized DAC initiatives and evaluated potential DATA professors.

Recommendations

- Expand Peer Mentorship Program to all courses.
- Create a Digital Resource Guide of training resources.
- Host workshops related to different data skills/programs.
- Increase CAIDS social media presence.

Tulane Connolly Alexander Institute for DATA SCIENCE

MEET BOLÍVAR APONTE ROLÓN

DATA LAB MANAGER

Bolívar (he/him) is a Ph.D. candidate in the Department of Ecology and Evolutionary Biologist. His work uses metagenomics and whole-genome sequencing to explore the interaction microbes in tropical trees and alpine yellow monkeyflowers. He combines field biology and wet lab skills with data science to answer how leaf traits in tropical trees and alpine yellow monkeyflowers influence the microbial communities able to colonize them. He's passionate about data science and FAIR principles in science.

"My time working with the Lab has been a great collaborative experience. Working with folks that want to make data informed decisions and contribute to the advancement of data literacy is deeply satisfying."

2023-2024 Lab Ambassadors

Sarah Vannoni (she/her)

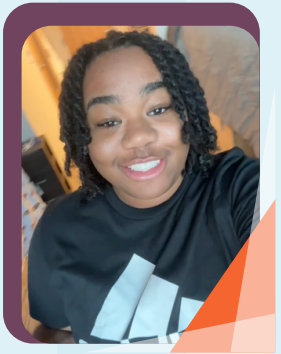
Data Ambassador

Sara Vannoni (she/her) is a freshman majoring in Public Health with a minor in Chinese Language. Sara appreciates the interdisciplinary aspects of the CAIDS Ambassador team and has enjoyed learning about how data literacy applies to different fields of academia. She is optimistic that the team will increase engagement with CAIDS and undergraduate DATA classes, and is excited to see how the program grows. She enjoys walks in Audobon, PJ's iced tea, and volunteering with Tulane's Culinary Medicine Initiative.

Vakaya Lee (they/them)

Data Ambassador

Vakaya Lee (they/them) is a sophomore majoring in Exercise Science with a minor in both Cell & Molecular Biology and Chemistry on the pre-medical track. Vakaya's favorite thing about being a CAIDS Ambassador is the fact that they get the opportunity to collaborate with all different types of people and help explore or expand their ideas. On top of being a CAIDS Ambassador, Vakaya also works as a Clinical Research Assistant at Tulane's Medical Center. In their free time, they enjoy exploring the city, making music, and hanging out with family and friends.



Samuel Johnson (he/him)

Data Ambassador

Samuel Johnson (He/Him) is a Freshman at Tulane University. He is currently double majoring in Homeland Security and History. Sam's favorite thing about the CAIDS Ambassador program is the education aspect of learning more about data science and data liberty. Aside from being a CAIDS Ambassador, Sam enjoys playing lacrosse, learning about politics, and scenic views.

Nina Moore (she/her)

Data Ambassador

Nina Moore (she/her) is a sophomore majoring in Chemical Engineering & Computer Science. Nina treasures the collaborative and dynamic environment of the CAIDS Ambassador team. Nina has enjoyed learning about project management and data literacy. She is optimistic that the CAIDS team will support the Tulane student body in their academic and personal goals. In her free time she enjoys video games, including Minecraft, watching the Netflix television show "Monk", and spending time with her family. In addition to working as an ambassador for CAIDS, she works at the Newcomb's Children's Center on campus and as a First Year Peer Mentor.

Katie Bogdanow (she/her)

Data Ambassador

Katie Bogdanow (she/her) is a Freshman majoring in Mathematics and Sociology. She enjoys collaborating with her peers within the CAIDS Ambassador cohort and contributing to the developing program. Katie is passionate about data literacy and equity, and values the interdisciplinary aspect of the field. She enjoys watching films, exploring New Orleans, and is involved with Tulane's on-campus Hillel.

Ritika Mishra (she/her)

Data Ambassador

Ritika Mishra (she/her) is a junior at Tulane majoring in Computer Science, Math, and Economics. Ritika loves working with her co-workers to find new ways to promote data literacy, and is excited to see how CAIDS will create an impact on campus. Outside of CAIDS, Ritika loves playing tennis, soccer, rock climbing, and having fun with friends.

Data Peer Mentors

- Foster a positive learning environment for students at all data literacy levels by actively building learning communities around care, mutual support, and curiosity.
- Make data education accessible to all undergraduate students through assessment feedback and curriculum support sessions (office hours, group sessions, tutoring).
- Use equitable data strategies while collecting and analyzing student data such as grades, attendance, and surveys.
- Support in the development of new course materials around data literacy topics.

CAIDS Peer Mentors

Supervising Faculty: Jacquelyne Thoni Howard Ph.D. and Lisa Dilks Ph.D.

Overview

CAIDS Data Peer Mentors act as teaching assistants, guiding fellow students who take data courses at CAIDS by exploring and troubleshooting data questions and problems during support sessions.

Tulane Connolly Alexander Institute for DATA SCIENCE

Contributions

- We help shape positive and supportive learning communities around data.
- We support in the development of new course materials around data literacy topics.
- We make data education accessible to all undergraduate students and use equitable data strategies.

Highlights

- Created the 50-page data peer mentor handbook.
- Held office hours and student tutoring sessions.
- Presented on current events related to data science aligned with student interests.
- Grew as educators and fostered equity within data science.

MESSAGE FROM DR. PATRICK BURTON

EXECUTIVE DIRECTOR AT CAIDS

"One of the best ways we have been able to improve access to data literacy and data science is through our student mentors and leaders. Students face many hurdles in data-focused courses, such as gaps in some math, stats, or computer skills. It can be challenging for instructors to provide the individualized support that is needed. Our peer student mentors provide accessible and empowering support for students in our DATA courses, breaking these barriers and helping students thrive."

2023-2024 Lab Peer Mentors

Lily Markus (she/her)

Data Ambassador

Lily (she/her) is a junior double majoring in International Development and Latin American Studies. She is a New Orleans native. She is passionate about international law and education. Within CAIDS, Lily is passionate about data equity and remains committed to fostering an inclusive educational environment for her peers. Lily's experience as a CAIDS peer mentor has enriched her academic experience at Tulane and contributed to her professional development. In her free time, Lily enjoys playing soccer, going to the gym, spending time with friends, and watching sunsets.

Doxey Kamara (he/him)

Data Ambassador

Doxey Kamara is a graduating Senior at Tulane University. He is planning to go to school for a Masters degree in Information Science, and use that skillset to contribute to making education more accessible in the digital age.

THE LAB PROJECTS

LGBTQ Health Centers in the USA

by: Sam DeMarinis

For my data project, I decided to examine the presence and representation of LGBTQ Health Centers in the USA using Python and the Pandas library. Apart from the number of centers per state, I was interested in looking at the kinds of services offered at each center as well as presence per capita. I utilized a public dataset containing information on every center, including features such as location, services offered, and individuals served. The dataset, containing only 434 centers total, required much preprocessing and cleanup before further analysis.

After some basic investigation of variables, I examined the number of centers in each state. The histogram of states, ordered from lowest to highest, was quite skewed. As expected, the states with relatively high populations, such as California and New York, each had over 50 centers. States with low populations, such as New Hampshire and Wyoming, each had only one center. I utilized another Python library, Geopandas, to visualize this data on a map of the continental US, as seen below.

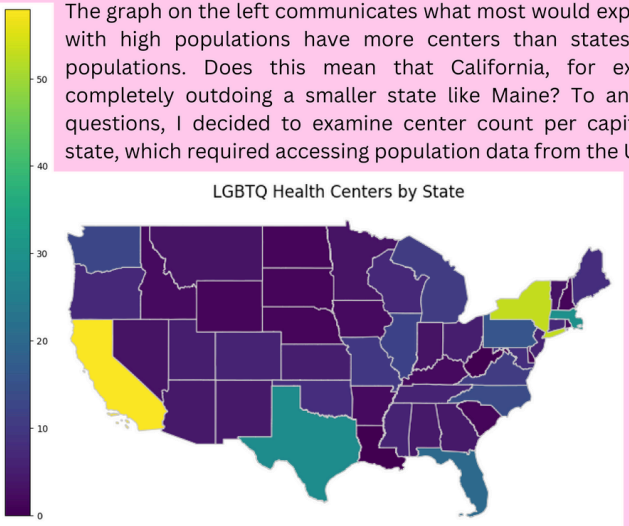
The graph on the left communicates what most would expect: states with high populations have more centers than states with low populations. Does this mean that California, for example, is completely outdoing a smaller state like Maine? To answer such questions, I decided to examine center count per capita in each state, which required accessing population data from the US census.

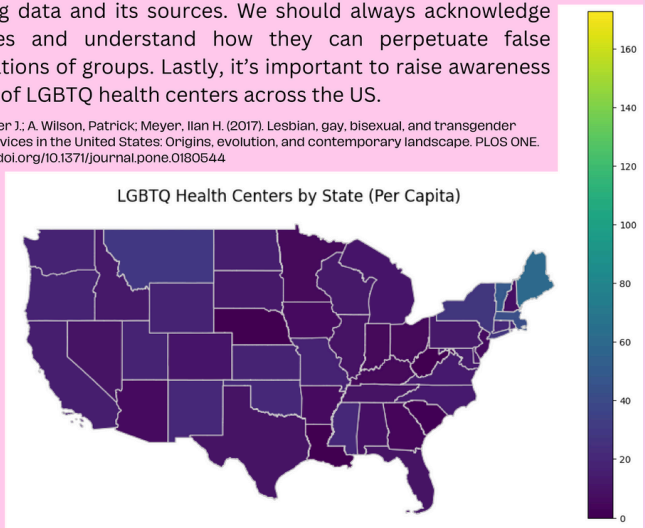
Since the dataset was created in 2017, I accessed population data from the same year. I created a new variable called “Center Per Capita” by dividing each state’s center count by its population. This provides more information on center availability as it relates to the states’ populations. As seen in the graph on the right, when the states’ populations are considered, there is little center access in nearly every state.

This communicates that, across most of the continental US, there are not enough LGBTQ health centers for the general population. Though LGBTQ individuals make up a minority of the US population, it is important that there is adequate access to such centers that can provide people with sexual health resources and more. To further this analysis, I incorporated a public dataset containing information on the counts of same-sex couples in every state. The results of examining center access per couple were similarly disappointing.

Through this project, I learned even more about the importance of questioning data and its sources. We should always acknowledge data biases and understand how they can perpetuate false representations of groups. Lastly, it’s important to raise awareness of the lack of LGBTQ health centers across the US.

Martos, Alexander J.; A. Wilson, Patrick; Meyer, Ilan H. (2017). Lesbian, gay, bisexual, and transgender (LGBT) health services in the United States: Origins, evolution, and contemporary landscape. PLOS ONE. Dataset. https://doi.org/10.1371/journal.pone.0180544





Visualizing the Impact of COVID-19 on Telehealth Use in the United States

By: Meghan Nagia

Introduction

- **Project Goal**: To examine the state and use of telehealth as a form of healthcare delivery in the United States in the past, present, and future of the COVID-19 pandemic.
- **What is Telehealth?** The practice of medicine at a distance (remotely) using electronic information and telecommunication technologies.
- **Background:** In March 2020, the world was declared to be in a global pandemic due to the pervasive surge of COVID-19. New health mandates were implemented, including the transition from in-person medical care to remote healthcare services, leading to the rise and popularity of telehealth.

Methods

- To examine the history, practice, and growth of telemedicine in the United States, extensive desk research was conducted through the study of information and analysis of datasets, as well as cross-checking statistics and data from sources such as the CDC, Pew Research Center, National Center for Health Statistics, and several others.

Analysis

- The future practice of telehealth is largely dependent on the preference and comfort of the provider and the patient. Therefore, the continuous adoption of telehealth will vary based on the medical specialty, which is emphasized by the data sets chosen, so further advancements and progress is required in the approach of telehealth as well as the technical infrastructure or equipment.

Discussion

The findings of the data presented emphasize the potential of telehealth and its growth since a pre-pandemic world, while also highlighting its future limitations, especially in certain specialties.

- **COVID-19's Impact**: The shift of healthcare delivery and use of technology to deliver remote care throughout the pandemic has allowed healthcare providers and patients familiarize themselves with the practice and adjust to the possibility of it becoming a new norm for healthcare delivery. The overall idea of utilizing technology for delivering medical care and other aspects of remote care can be combined to create new tools, technologies, and innovations that might allow telehealth to serve as a prominent modality for medical care. The country's experience with telehealth allows healthcare providers to be better prepared in case of another global public health emergency.
- **Future Limitations**: Data security, disparities in technology access, and regulatory barriers should also be considered.

Overall, while telehealth usage has been higher than pre-pandemic levels but lower than mid-pandemic highs, the utilization of telehealth and digital health in general in the medical field still remain extremely positive and promising. The pandemic sparked realizations of technology's positive impact on the healthcare industry and has led to further innovations in healthcare digitization to allow for equitable, accessible, and quality delivery of medical care.

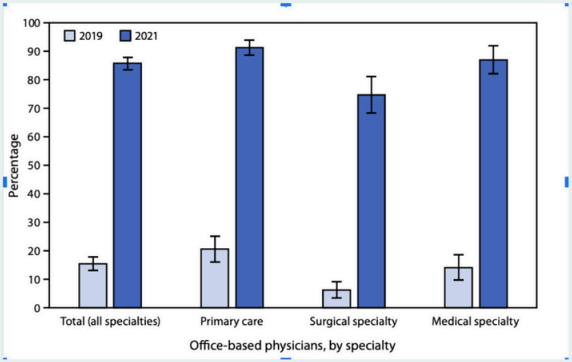


Figure 1 showcases the percentage of offce-based physicians using telehealth technology in the United States in 2019, pre-pandemic, and in 2021, during the midst of the pandemic. The spike in telehealth usage is quite clear. (Data obtained from QuickStats, 2022).

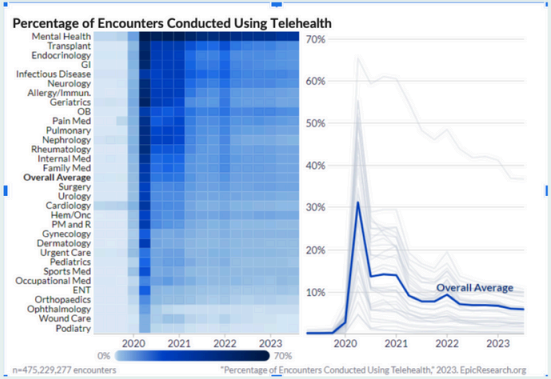


Figure 2 is based on 220 million patient records from 1,272 hospitals and over 27,000 clinics in the United States. It highlights that of all specialties in 2020, the highest telehealth rates can be seen in mental health, endocrinology, geriatrics, transplant, and gastroenterology. As of 2023, mental health continues to rank as one of the highest specialties still utilizing telehealth services. The specialties with the lowest telehealth rates, possibly due to their need for hands-on care, both during the pandemic and post-pandemic, include orthopedics, ophthalmology, podiatry, and wound care.

Mapping Chinese Churches

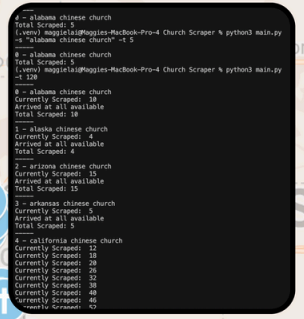
By Maggie Lai

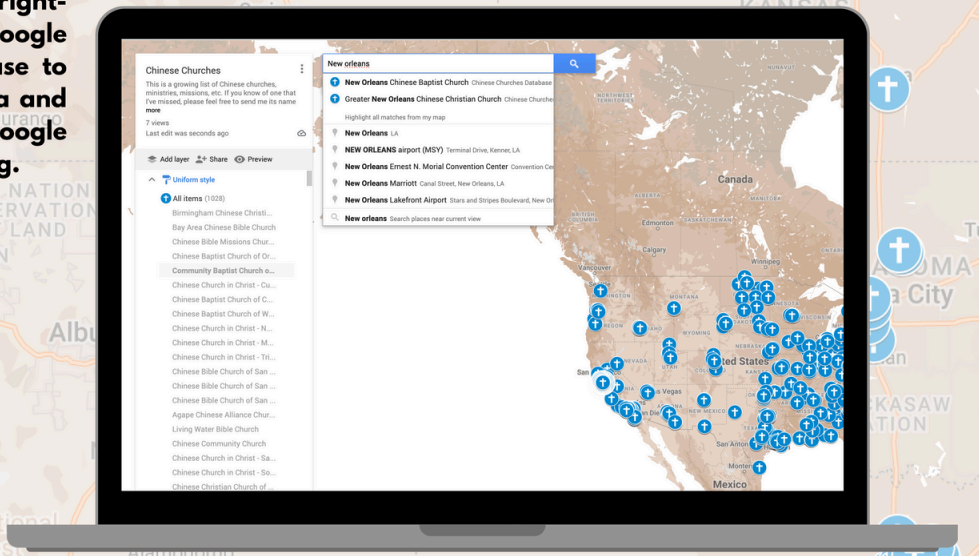
Overview

There is no comprehensive directory or database of the over a thousand Chinese churches and ministries in the US. This project aims to centralize and visualize this data in one searchable and navigable map.

Process

Chinese churches' names, addresses, websites, and phone numbers were gathered into a single Google Sheet. I compiled this data by 1) running a Python and Playwright-based web scraper developed by Amin Boutarfi on Google Maps through Chromium, 2) comparing my database to regional and general directories, 3) cleaning the data and manually adding in missing entries. I integrated the Google Sheet into a Google My Map and opened global sharing.





Las Vegas Chinese Christian Church

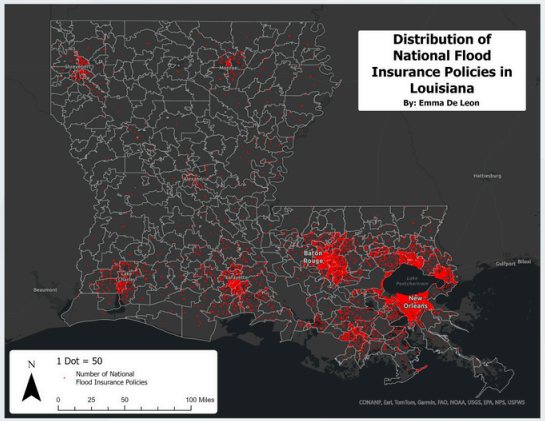
State	NV
City	Las Vegas
Church Name - Chinese	拉斯維加斯中華基督徒禮拜堂
Address	8978 W Nevso Dr, Las Vegas, NV 89147
Website	lvccc.org
Phone Number	(702) 541-1894
Source	Google Maps

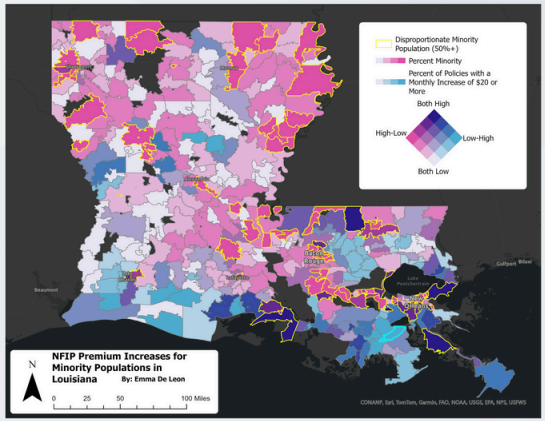
36.11346, -115.2875

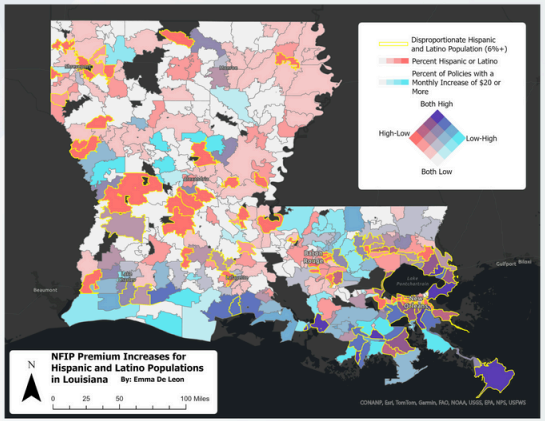
Mapping Increasing Flood Insurance Prices and Marginalized Populations in Louisiana

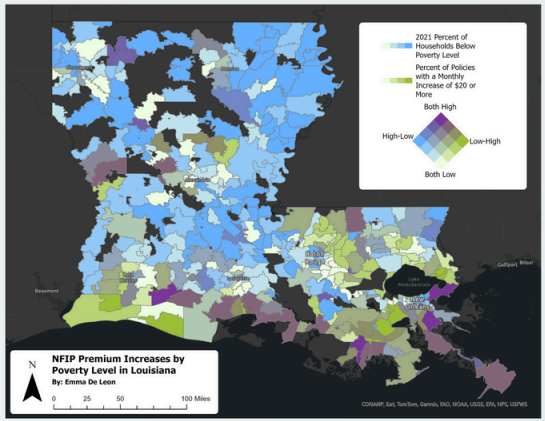
By: Emma De Leon

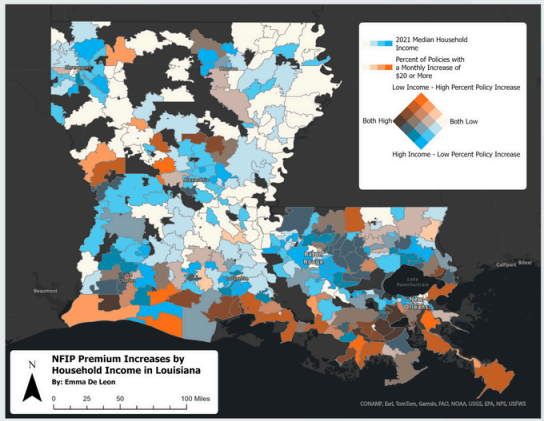
Background and Goal:
In April 2023, FEMA implemented Risk Rating 2.0, the new price rating formula of the National Flood Insurance Program (NFIP), causing flood insurance rates to skyrocket across the country. My goal was to understand key demographic characteristics (race/ethnicity and income/poverty) of ZIP codes in Louisiana that will see significant price hikes to their flood insurance policies.











Data:

- Count of single-family home NFIP policies in Louisiana ZIP codes sorted by price changes in "Louisiana – Risk Rating 2.0 – ZIP Code Breakdown" from FEMA at https://www.fema.gov/flood-insurance/risk-rating/profiles#downloads
- 2021 American Community Survey (ACS) 5-Year data on median household income, percent of households below poverty level, and race/ethnicity in Louisiana ZIP codes

Data Work:

- Cleaned FEMA data in Excel and uploaded it to ArcGIS Pro. Joined to feature class of ZIP codes.
- Added ACS data to ZIP codes using the Enrich tool.
- Calculated the percent of each zip code's population that is a racial minority (excluding Hispanic/Latino population) in the attribute table.
- Calculated the percent of policyholders in each zip code who will experience an increase of $20+ per month.

Visualizations:

- Created a dot density map to show where flood insurance policies are concentrated in Louisiana.
- Created four bivariate maps in ArcGIS Pro to show ZIP codes with high premium increases and high racial/ethnic minorities, low median household income, or high poverty levels.
- Highlighted ZIP codes with disproportionate minority populations.
- Decided to not highlight ZIP codes with high levels of poverty because an overwhelming majority would be highlighted.

DATA SCIENCE DEMOGRAPHICS

BY: KAILEN MITCHELL

INTRODUCTION

How does the gender gap in data science present itself in different demographics? I used three datasets gathered from surveys taken by Kaggle, an online data science community, to study disparities along the lines of job title, country of residence, and age. I used Python's Pandas library to do data cleaning and generate results through bar charts.

METHODS

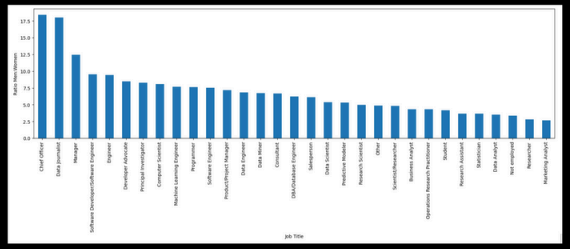
In my Pandas code, I used the map function to clean the data since in 2017 age was collected as a float, but in 2018 and 2019 the data was categorical. I used map a number of times to achieve the goal of well organized and cohesive data. To create the graphs which represent each demographic, I made pivot tables which counted up my desired varible by gender. Then I calculated the ratio between the Male and Female columns and plotted those numbers.

```
countriesmapped = datasci['Residence'].map({
    "United States": "United States",
    "Canada": "Canada",
    "Taiwan": "Taiwan",
    "Brazil": "Brazil",
    "India": "India",
    "Australia": "Australia",
    "Russia": "Russia",
    "Netherlands": "Netherlands",
    "Italy": "Italy",
    "United Kingdom": "United Kingdom",
    "Czech Republic": "Czech Republic",
    "Colombia":"Colombia",
    "Germany":"Germany",
    "Denmark":"Denmark",
    "Poland":"Poland",
    "South Africa":"South Africa",
    "Sweden": "Sweden",
    "Portugal": "Portugal",
    "Mexico":"Mexico",
    "New Zealand":"New Zealand",
    "People 's Republic of China": "China",
    "Japan":"Japan",
```

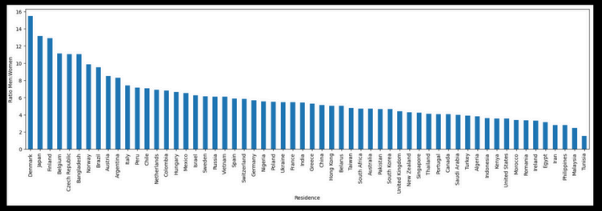
```
#do a mapping for df2017

ages2017mapped = df2017['Age'].map({
    18.0: "18-21",
    19.0: "18-21",
    20.0: "18-21",
    21.0: "18-21",
    22.0: "22-24",
    23.0: "22-24",
    24.0: "22-24",
    25.0: "25-29",
    26.0: "25-29",
    27.0: "25-29",
    28.0: "25-29",
    29.0: "25-29",
    30.0: "30-34",
    31.0: "30-34",
    32.0: "30-34",
    33.0: "30-34",
```

```
[ ] #the ratio of women to men in each age group

    agesratio = datasci.pivot_table(
        index =["Age"], columns='Gender', values='num', aggfunc='count'
    )

    agesratio = agesratio['Male']/agesratio['Female']


    agesratioplot = agesratio.plot.bar(figsize=(10, 5))

    agesratioplot.set_xlabel('Age')
    agesratioplot.set_ylabel('Ratio Men:Women')
```

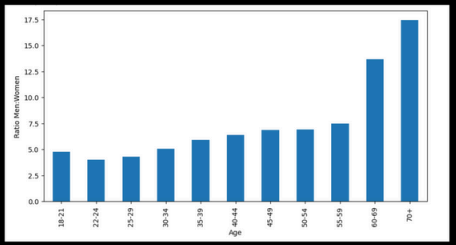
RESULTS



The two management positions lead the graph with most men for every woman. Women are lacking most in leadership positions within the field. Academic fields such as researcher and student seem to be less skewed. Data journalist may be an outlier.



Countries Denmark, Japan, and Finland lead the graph with most men for every women in data science. The gap is quite significant for these countries as they average around 14 men for every women. Comparing this to the US, the US comes in around 4 men for every women. While still a significant gap, some countries seem to be doing much better than others.



As the age goes up, the gender gap becomes more significant. This makes sense since the field has become more inclusive to early careerists over time.

THE LAB PROJECT POSTERS

Testing Database Functionality and Building DH Exhibits

The Beautiful Sisterhood of Books

Project Partners: Kate Adams Ph.D., Jacquelyne Howard Ph.D. & Susan Tucker Ph.D.

OVERVIEW

This Beautiful Sisterhood of Books is a digital recreation of the Women's literary department from the 1884 New Orleans World's Fair.

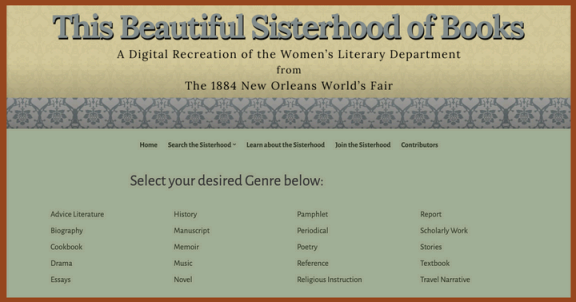
CONTRIBUTIONS

- In preparation for future website changes, the DRI team tested the database's functionality and fixed all bugs found.
- We also focused on website upkeep, social media promotion, and inventory digitization.
- We created a social media strategy with the goal to track analytics and metadata of the physical archives for next year's project.
- We constructed a timeline page to host information about Fannie Barrier Williams and her work.

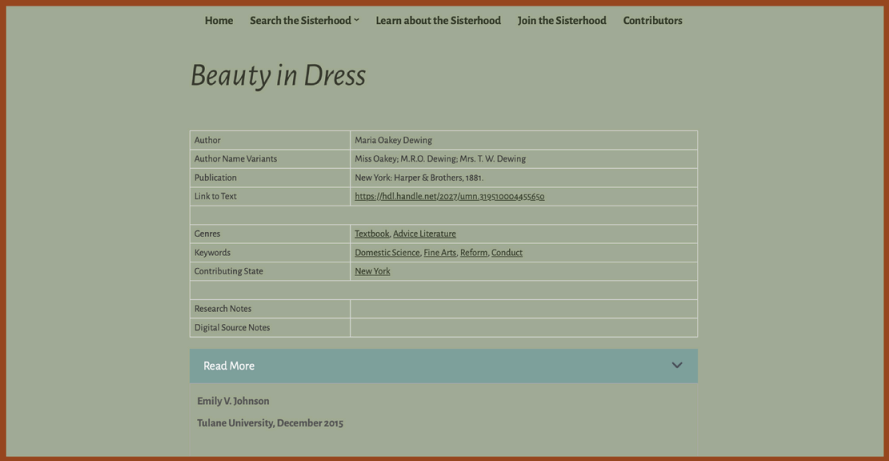
TECHNOLOGY

- The DRI team supports the digital archive for This Beautiful Sisterhood of Books through Wordpress.
- We organized the database to Dublin Core Standards using custom post types, through plugins Custom Query Blocks and Tag Groups.

New Social Media Account



Organization of Books by Genre



Book Listing Showing Organization Tags

Project Overview

Center for Sport Database
Implementation and Visualization

Project Partner:
Teresa M. Belt, M.Ed

Our team is creating a searchable database and visualizations for website integration from an Excel spreadsheet of data that was collected from various front offices across several sports by the Tulane Center for Sport.

Towards this goal, we researched database-building options map visualizations tools

Original Spreadsheet

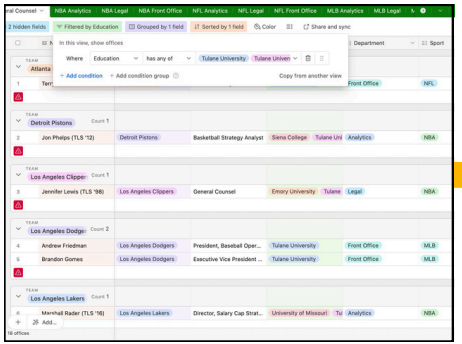
Database Options

Visualization Tools

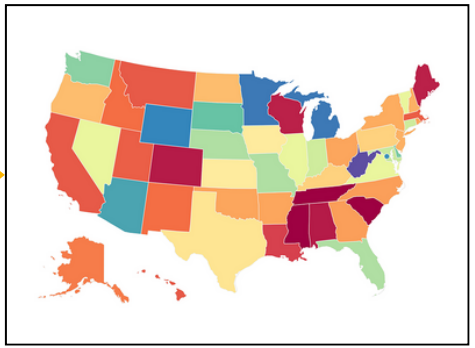
Once the center approved Airtable integration to Wordpress, we began work on the data itself.

This data work involves

- cleaning the data to be implemented into Airtable
- working towards a heat map of sports offices across the US
- communicating with project partner to highlight data



Airtable Functions on Data



Heat Map of Sports Offices

Building An Adalo APP: Crime Survivors NOLA

Project Partners:
Julie Ford & Rose Preston

Introduction

Crime survivors NOLA is an organization that has created a guidebook for the victims of violent crime. Over time, we have worked with partners to create a searchable database of local resources. This projected eventually morphed into creaing an app for crime victims using adalo.

Setting up the Database

We used the built in Adalo databases to crate a set of data with with boolean values indicating which type of crime each resourse could be helpful for. We also included contact information for each recourse. One important step here was cleaning the data to make sure each contact was proparly formatted to correctly appear.

Search Function

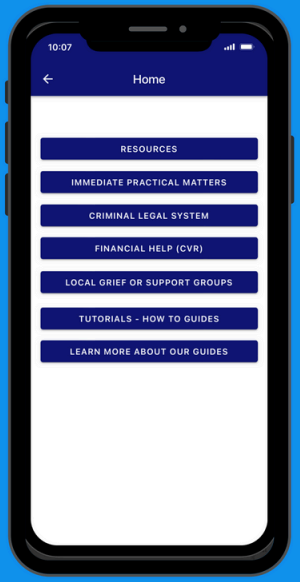
The most involved part of this process was setting up the search function. Because Adalo is set up as “screens” rather than allowing for dynamic content, we eventually realized we must create a new screen for every possible search. The next step was using Magic text, adalos dynamic text feature, to properly populate each of the screens with the contact data for each recourse.

Building the App

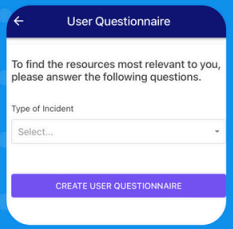
The app required a number of iterations. In the early stages we hoped to create a login or pinched, but due to privacy concerns we eventually decided against this. The next step was creating the internal logic and flow of the app, which was eventually possible. Finally we needed to allow the app to acess the website data. We were eventually able to do this by downloading the website as pdfs because adalo would not allow us to utilize internal web views.

Challenges

The biggest challenge we faced was privacy. Because of the sensitive nature of this project, it was important to keep user information private throughout app usage, including during login and redirection to external websites. To address this issue, we did not collect email information at login and included instructions on how to clear your browser.



App Home Page



Resource Filter Questionnaire

App Page Linkage Setup

Resource Listing

FEMINIST PEDAGOGY DATABASE

Project Partners: Clare Daniel Ph.D. & Jacquelyne Howard Ph.D.

Overview

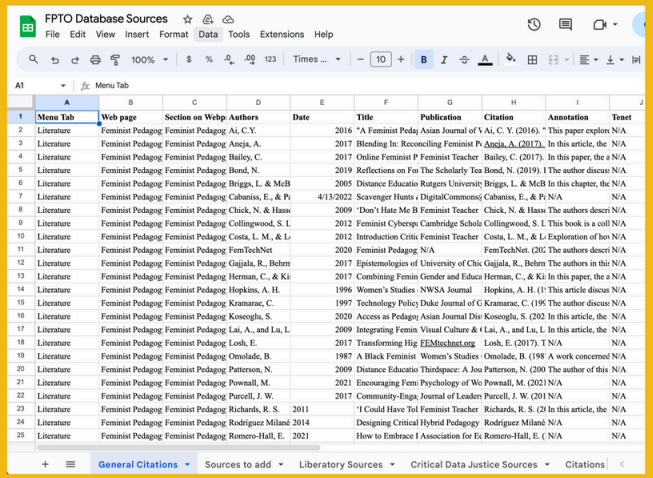
The Feminist Pedagogy for Teaching Online provides resources about integrating feminist pedagogy and technology into online, hybrid, and traditional undergraduate courses. This year, the Data Lab's work on the site surrounded the creation and implementation of a database that could query resources for instructors.

Process

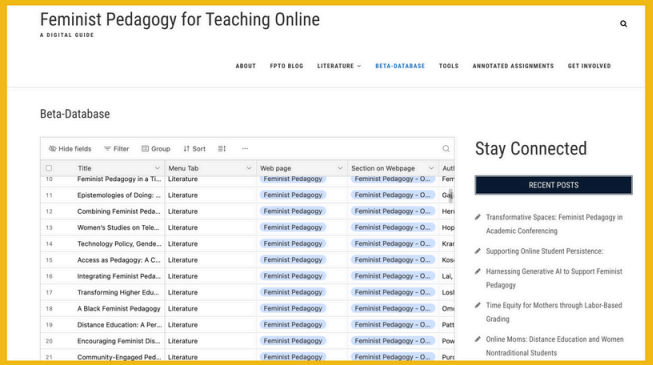
- Compile a database consisting of all feminist teaching resources on the site using Google Sheets
- Clean and organize data using Google Sheets
- Design and implement the database into the site using Airtable as a beta process
- Research to host database directly on website using custom post types

Technology Used

- Wordpress as the site platform
- Google Sheets for data collection & cleaning
- Airtable to integrate database into site
- Custom Query Blocks and Tag Groups to organize custom posts



Google sheet database of all resources on the site



Beta-Database compiled & implemented by our team

THE FRANCES GAUDET LEGACY PROJECT

PROJECT PARTNERS: NEIL BOLTON & ROSANNE ADDERLEY, PH.D.

Frances Joseph-Gaudet was a leader in education, prison reform, and social work in post-Reconstruction era New Orleans, and is now recognized as a saint in the Episcopal Church. **The Frances Gaudet Legacy Project** aims to share widely the example of her extraordinary life in order to guide and inspire similar work in our present times.

OVERVIEW

We primarily focused on digitally archiving historical records and making them easily accessible and navigable on the Frances Gaudet Legacy Project website. We created a **new site**, performed **archival research**, edited **database features**, and collaborated with a **service learning class** through focus groups.

NEW SITE

- Created a mock-up homepage in **Omeka**, a digital archiving database tool
- Moved site hosting from **Wordpress** to **Omeka** to faciliate organization of archival resources
- Researched **search engine optimization** and **Google Search Console Tools** because the site did not populate on web searches

ARCHIVAL RESEARCH

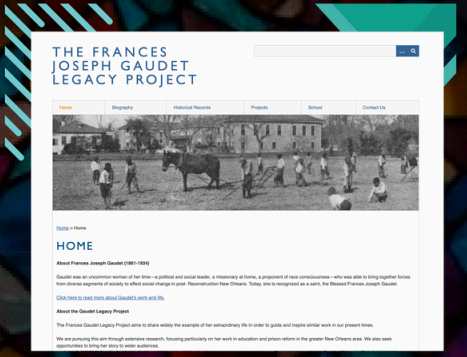
- Visited the **Episcopal Diocese of Louisiana Memorial Archives** for records on the **Gaudet Episcopal School**
- Found bulletins, letters, and financial reports on the school's history

DATABASE FEATURES

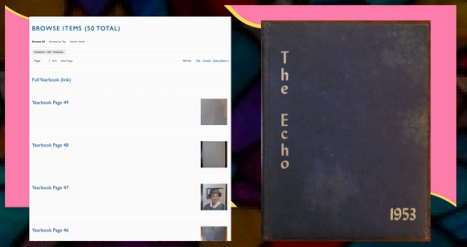
- Revised database to hide sorting categories that do not currently contain any primary resources
- Researched and implemented alternative displays
  - Displayed collections as **thumbnails**
  - Added descriptions to **collections**
  - Added the Gaudet Episcopal School **yearbook**

SERVICE LEARNING CLASS

- Began to improve site's **user interface** and create a **dataset** from the Gaudet Episcopal School yearbook
- Reviewed **Google Jamboard** of class feedback and class-generated **Google Forms** on individuals in the yearbook



Frances Gaudet Legacy Project Home Page



1953 Yearbook Pages Uploaded to Omeka

Focus Group Feedback on Website

Junior League: Status of Women in NOLA Data Visualizations

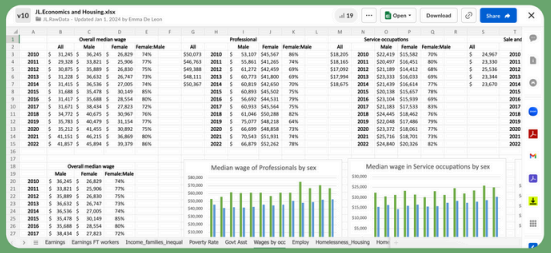
Project Partner: Junior League of New Orleans

<u>Overview:</u> In 2016, Newcomb Institute released "The Status of Women in New Orleans Since Katrina Report." In collaboration with Junior League, Newcomb Institute and the Connolly Alexander Institute for Data Science partnered to create an updated and extended report titled "100th Anniversary Junior League Report of Women in NOLA." The report encompasses the status of women across the following categories: demographics, health, economics, housing, crime and police, politics, and COVID-19. The DRI team produced data visualizations.

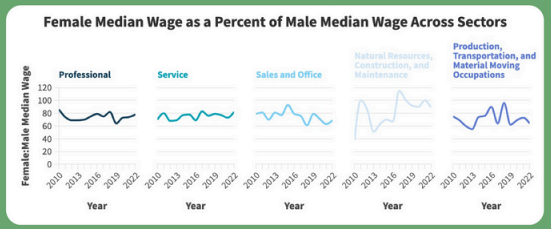
<u>Technology:</u>

Excel: store raw data and document peer review and feedback

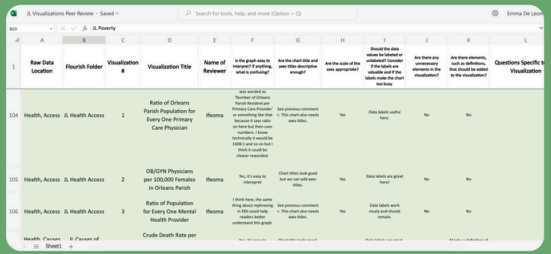
Flourish: open source data visualization tool, used to develop charts



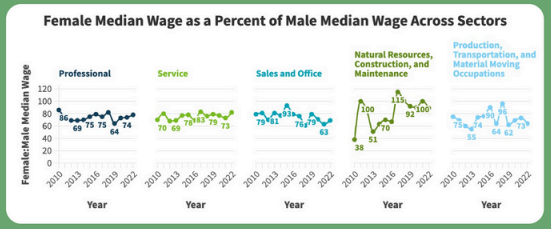
Raw Data and Preliminary Visualizations



Visualization Created in Flourish



Internal Peer Review Process



Visualization Updated With Peer and Partner Feedback

1 Preparation:

- Reviewed the previous report's visualizations
- Reviewed data gathered by Data Analyst Melissa Evans
- Created a visualization plan

2 Producing 155 Visualizations:

- Priorities: clarity and accuracy, titles, labels, captions, colors, types of graphs and charts
- Special consideration: represent all races and ethnicities, especially those with relatively small populations in New Orleans
- Corrected any data discrepancies and errors in calculations and formatting in consultation with Evans

3 Peer Review:

- Peer-reviewed collaboratively to provide feedback on overall presentation, clarity, and visualization elements
- Updated each visualization based on feedback and produced several additional visualizations

4 Project Partner Review:

- Downloaded, compressed, and delivered 155 visualizations to project partners for inclusion in draft report
- Received feedback and requests for additional visualizations to be made
- Updated and produced 60 visualizations and delivered to project partners

LGBT Collective Website Design

Project Partners: Sunshine Best and Manny Ocasio

Goal:

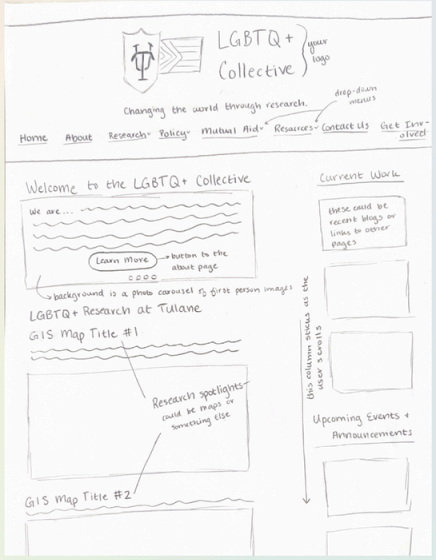
The Data Research Intern team is tasked with creating a website for the LGBT Collective. The website will be an educational and translational science hub that breaks down both academic science and literature and makes issues around LGBT social justice easier to understand with a focus on multidisciplinary policy-making. It will be a resource for advocacy work and will use common language that is reflective of the area. This website will house data materials such as maps, visualizations, annotated studies, a database of existing research, and other educational materials related to LGBT Social Justice. To house and provide access these data materials, we first needed to design a website.

Website Design:

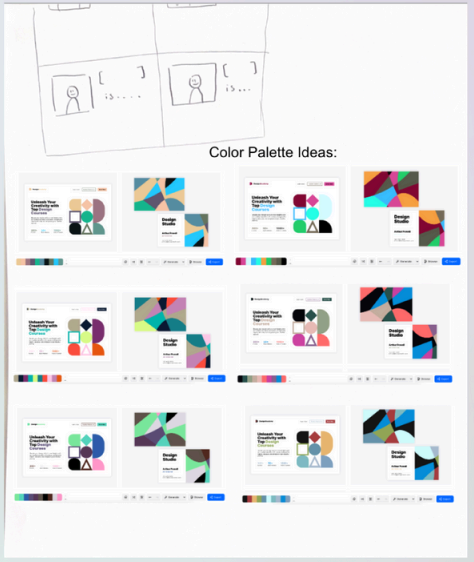
- Created a list of questions about the intended website functionality while considering data aspirations
- Used feedback from the project partners to create a pencil-and-paper mock-up of the homepage

Next Steps:

- Decide on a web hosting platform
- Build website and database
- Create data visualizations
- Create interactive media



Homepage Design Mock-Up



Website Color Palette Ideas

Website Redesign for the New Orleans Maternal & Child Health Coalition

Project Partners: Brittany Williams, Jazlynn Taylor, Dr. Clare Daniel

Overview

The Maternal and Child Health Coalition works through advocacy to improve outcomes, experiences, and access to quality, respectful care during pregnancy, birth, and the postpartum period. To better communicate their data for the upcoming legislative session, we worked on changing the website theme and uploading more content to enhance our capability to host and showcase MCH's data work, such as Legislative Score Cards and the Birth Outcomes Map.

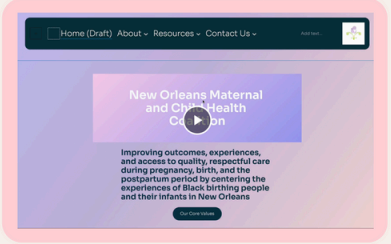
Old Site

New Site

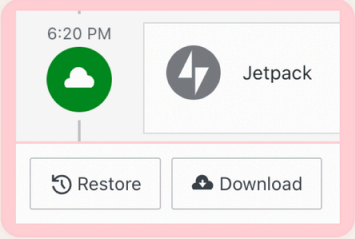
Process: Theme Change

Since theme changes take effect immediately upon implementation, to avoid publishing an incomplete website:

- We created screen recordings showcasing a potential web view for the project partners, allowing us to obtain their approval before publishing the website.
- We utilized Jetpack, a WordPress plugin, to reset each edit to its original state, ensuring seamless restoration to previous versions.
- We made the suggested edits live after the project partners' approval.
- Technology Used: Wordpress, Jetpack, Zoom screen sharing/recording



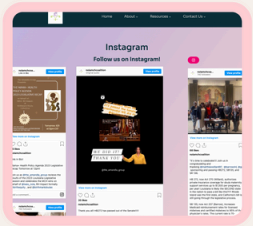
Screen Recordings

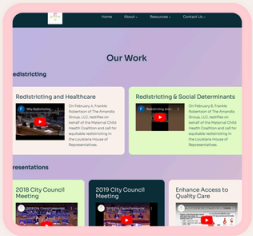


Jetpack Plug-in

Process: Timeline Development

- We designed a timeline to illustrate the history of MCH in a visually engaging way. This dynamic timeline integrates various elements, including text, images, videos, and audio clips.
- Furthermore, we enhanced the sizing and layout of other pages to ensure the entire site is cohesive and organized.





GEOSPATIAL AND CONTEXTUAL DATA COLLECTION
CIVIL WAR MONUMENTS DATABASE

Project Partner: Kris Plunket, PhD Student

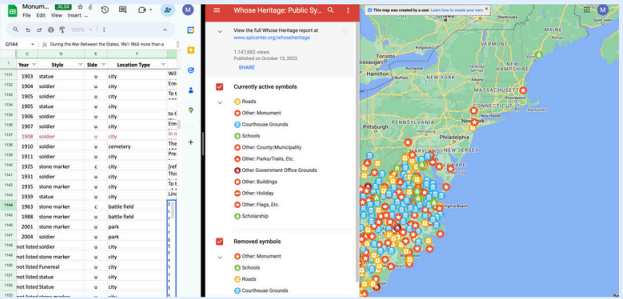
Objective: The partner and our team created a comprehensive database of Civil War monuments in the United States as a tool for education, research, and communities with context to understand their local memorials. The database will be visualized as a map that shows the distribution of monuments across time and geographical space. Many people still believe the Lost Cause rhetoric that slavery had no role in the war, and that makes it harder for them to understand how racism continues to affect our political landscape. Communities wondering if their own Confederate monuments really honors the legacy of white supremacy will hopefully find this catalogue helpful in seeing how individual memorials that seem innocent are part of larger, more pernicious picture.

OUR WORK

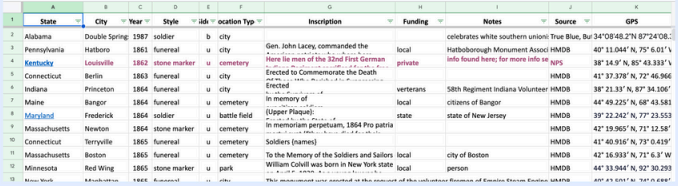
- Cleaning data & filling in the gaps of missing information using other databases
- Inputting coordinates of each monument
- Cross-checking and reviewing every entry on the compiled databse with HMBD and other databases

TECHNOLOGY USED

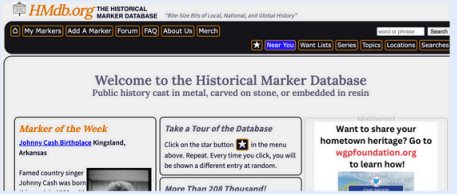
- Microsoft Excel
- Google Sheets
- The Historical Marker Database



Monuments Database on Google Sheets #1



Monuments Database on Google Sheets #2



The Historical Marker Database

African Letters Site Searchability

PROJECT PARTNER: LIZ MCMAHON PH.D.

OVERVIEW

African Letters Project is a web-based database that provides descriptive metadata for correspondence between Africans and Americans during decolonization. The DRI team worked on web development by building and maintaining the site.

TECHNOLOGY

- Wordpress
- ArcGIS integration with Wordpress

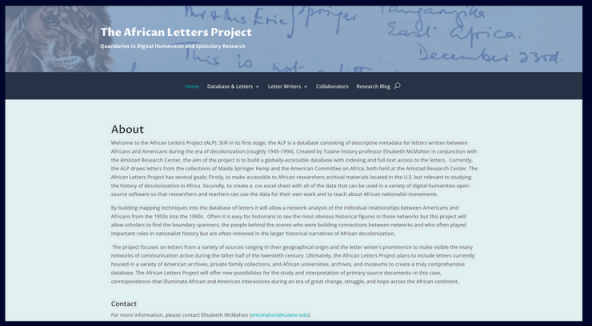
GOALS

- Add more content to the site by integrating ArcGIS storymaps and adding articles
- Research options for increasing the search optimization of the site

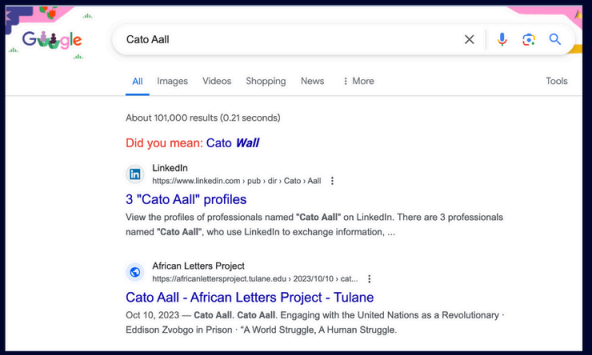
PROCESS

The DRI team used troubleshooting, collaboration, and research to meet the project partner's goals. Because Wordpress filters out HTML for security, it was difficult to integrate ArcGIS storymaps into pages on the site. We allowed multiple team members to troubleshoot and eventually found resources online that outlined the integration process.

To increase site searchability, we researched how search engines rank and prioritize sites. We compiled a list of options and drafted a proposal of our findings to present to our project partner.



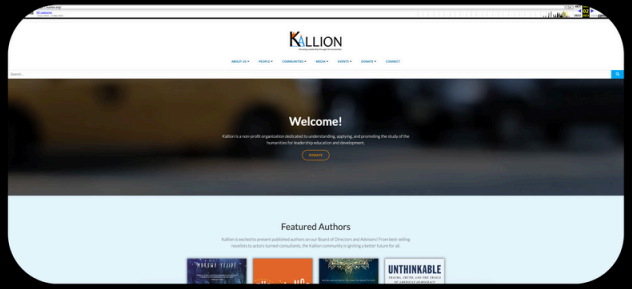
Home page of the site



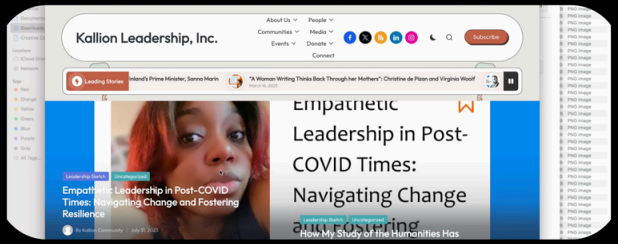
Google Search of one of the Letter Writers in the site's database

Kallion Website Revamp

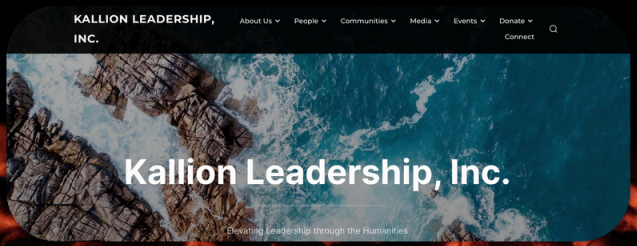
Project Partner: Mallory Monaco Caterine Ph.D



Webiste Homepage Before



Webiste Homepage Mock-Up #1



Webiste Homepage Mock-Up #2

Overview

Kallion Leadership, Inc. is a non-profit organization with a mission to design and develop communities for leadership education and development through the study of the humanities. The Data Research Internship team is revamping Kallion's website to be able to do deeper data work.

Contributions

- Reviewed the current Kallion website and the project partners' site outline for the website revamp.
- Sketched ideas for the new homepage layout.
- Tested 8 new themes and layouts in WordPress and generated homepage examples.

Technology

- The Kallion website is hosted on WordPress and Colibri.
- The Internet Archive Wayback Machine was used to view the original website.

Issues That We Faced

- Editing the header on any page within WordPress, including draft pages, resulted in changes going live across all website pages. WordPress's feature for restoring websites to previous versions was not working . To address this, we used The Internet Archive Wayback Machine to access previous website iterations, allowing for manual restoration.
- Desiring different headers for different WordPress pages was another challenge we faced. We solved this by crafting a new pattern within the site's template parts. Additionally, we documented these steps for future reference.
- When it came to implementing live edits to ensure the current website was not affected, we opted to stage the site instead of relying on draft pages. This involved creating an exact copy of the website that could be edited independently of the live version.


The Frances Gaudet Legacy Project
This Beautiful Sisterhood of Books
Kallion
New Orleans Maternal and Child Health Coalition
LGBT Collective
Tulane Center for Sport
Wendy
Emma De Leon
Sam DeMarinis
Kailen Mitchell
Meghan Nagia
Ifeoma Osakwe
Zoe Oboler
Jacquelyne Howard
ISSUE 7
2023-2024
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Newcomb Institute
TULANE UNIVERSITY