In Frame: Centering Representation in Moving Image Archives

Executive Summary

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Background

Have you ever wanted to look for films from a hundred or two hundred years ago? In today's world, this is near impossible. That is why we are working with In Frame, a project under the Academy of Motion Pictures Arts and Sciences, to create a database and online resource to help increase visibility of underrepresented films and figures. As more films are produced, other films are being lost due to time. We are losing critical parts of our history. This solution will help to preserve these films, meticulously organizing them based on key terms to illuminate the works of these underrepresented communities. This free, online platform ensures that everyone will have access to these films. It brings in data all around the world, including the Library of Congress, UCLA Film Institute. With our solution, we can model a complex relationship of terms and films that connect related works in a new, organized way. Users can easily search and educate themselves about the rich stories and histories of these groups.

Project Description

Project Opportunity

The current problem the team faces is that the In Frame project does not have a viable system that organizes their film catalog. More specifically, they want to be able to add tags with parent/child relationships while also being able to visualize the existing hierarchy to streamline research efforts. This helps support their mission to educate the film industry on how films of the past have represented or misrepresented minority groups and to preserve film which degrades as the decades pass. This is a priority because film is an ever-growing industry and thus, should be more inclusive moving forward. However, the project faces a few problems currently, one of the biggest being the difficult-to-scale Airtable system, which cannot be easily integrated into the Academy's existing Axiell system. Instead, we need to provide another solution to find the right system for the In Frame project.

Project Vision

The proposed vision for this project would be a Postgres (relational/linking) database that ports over of the data from the existing Airtable. In addition to the database, the client has also asked us to design and implement a simple UI that allows members of the research team to create new key terms and assign parent-child relationships between them. This product is a proof of concept and should not be used in a production environment for end users to

interface with and access. Sub-deliverables of this solution include table population scripts, revised ERDs for the database, example queries, and a visualization tool that allows for researchers to see their updated hierarchy in real time. This meets the needs of the In Frame project to select a new, efficient, and cheaper database to host film data.

Project Outcomes

- Created Conceptual/Physical model to visualize the structure of the database
- Cleaned, restructured, and de-duplicated existing In Frame data to fit the new schema
- Developed a Postgres database capable of importing and handling .csv files
- Delivered a scalable web application for the research team to update and model their “Controlled Vocabulary” terms hierarchy.
- Shared knowledge with our client to help them gain experience and learn how to use our application through remote control during our meetings.
- Provided extensive documentation regarding our development process and code implementation to help with technical issues and application management after handoff.

Project Deliverables

The key deliverables for the "In Frame: Centering Representation in Moving Image Archives" project include a new PostgreSQL database system to enhance data management and integration of film records, replacing the current Airtable setup. This system will also feature an intuitive user interface for easy data entry and management and detailed documentation for future maintenance. These improvements aim to streamline the organization of the extensive film catalog and support the project's mission of promoting diversity and inclusion within film archives.

Recommendations

We recommend three strategic focuses. First, extend the PostgreSQL database to include film titles, figures, and account types, as well as improving upon the website interface to enhance data management and access. Second, provide ongoing training for project staff and researchers to ensure effective use of the system. Third, establish regular assessments of the database and interface, assigning a dedicated team member to handle feedback and make necessary adjustments. Proactive communication with stakeholders and adapting to their feedback will ensure the project remains relevant and sustainable.

Student Consulting Team

Aaron To served as project manager. He is a senior majoring in Information Systems and minoring in Software Engineering. Upon graduation, he will join JPMorgan Chase & Co. as a Software Engineer in Plano, TX.

Sebastian Lu was the QA lead. He is a current Junior, majoring in Information Systems, with minors in Computer Science and Machine Learning. Sebastian will be working out of DC this summer at Yext Inc as a Software Engineer intern.

Meghashyam Krishnasamy was the client relations manager. He is a junior Information Systems major with a minor in Computer Science. Meghashyam will be moving to New York this summer to intern as a Software Engineer at Kalshi.