

# Computing and Museums

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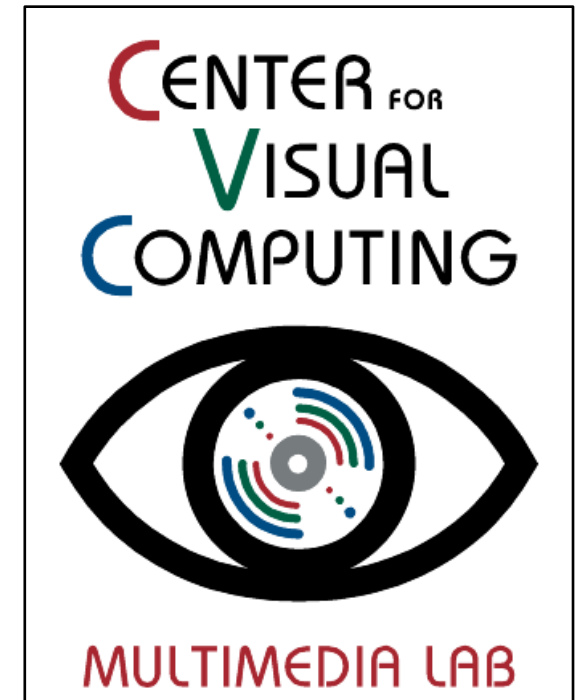
Stony Brook University

# Presentation topics

- **Introduction to CS**
  - Jack Heller and the Museum Computer Network
  - Benevolent Computing and museum projects
- **The Jazz Loft Online Archive**
  - Fieldwork during a pandemic
  - Model project – MOAC and DAMD
  - Jazz Loft Database Schema
  - Wireflow
  - Digitizing assets
  - Media formats and resolutions
  - Prototype
  - “Virtual Visit” user interface
  - Capturing 3D data
- **Presentations**
  - Interactive panoramas of the Jazz Loft
  - Online archive



Stony Brook  
University



# History: Jack Heller and the Museum Computer Network

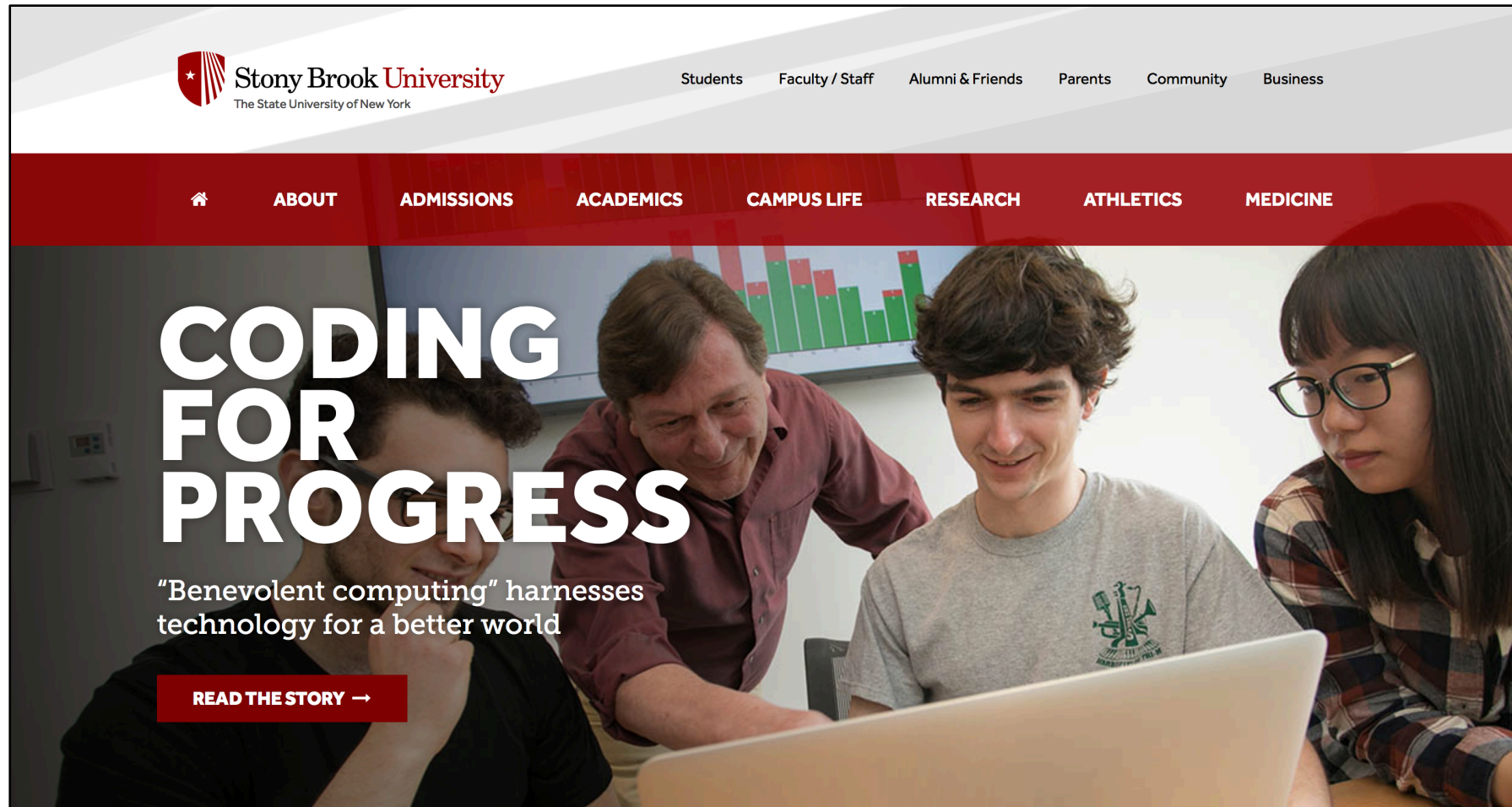
In 1970, the chair of the CS department, Jack Heller, developed a digital archival system for the Metropolitan Museum of Art and the NY Public Library. At the heart of the system was the General Retrieval and Information Processor for Humanities Oriented Studies (GRIPHOS).



MUSEUM  
COMPUTER  
NETWORK



# Fast Forward: Benevolent Computing (2010)



The image shows a screenshot of the Stony Brook University website. At the top left is the university's logo, which includes a red shield with a white star and the text "Stony Brook University" and "The State University of New York". To the right of the logo is a navigation menu with links for "Students", "Faculty / Staff", "Alumni & Friends", "Parents", "Community", and "Business". Below this is a dark red horizontal bar containing a home icon and links for "ABOUT", "ADMISSIONS", "ACADEMICS", "CAMPUS LIFE", "RESEARCH", "ATHLETICS", and "MEDICINE". The main content area features a large photograph of four people (three men and one woman) gathered around a laptop, looking at the screen. Overlaid on the left side of the photo is the text "CODING FOR PROGRESS" in large, bold, white capital letters. Below this text is a quote: "Benevolent computing" harnesses technology for a better world. At the bottom of the banner is a red button with the text "READ THE STORY →".

**Stony Brook University**  
The State University of New York

Students Faculty / Staff Alumni & Friends Parents Community Business

ABOUT ADMISSIONS ACADEMICS CAMPUS LIFE RESEARCH ATHLETICS MEDICINE

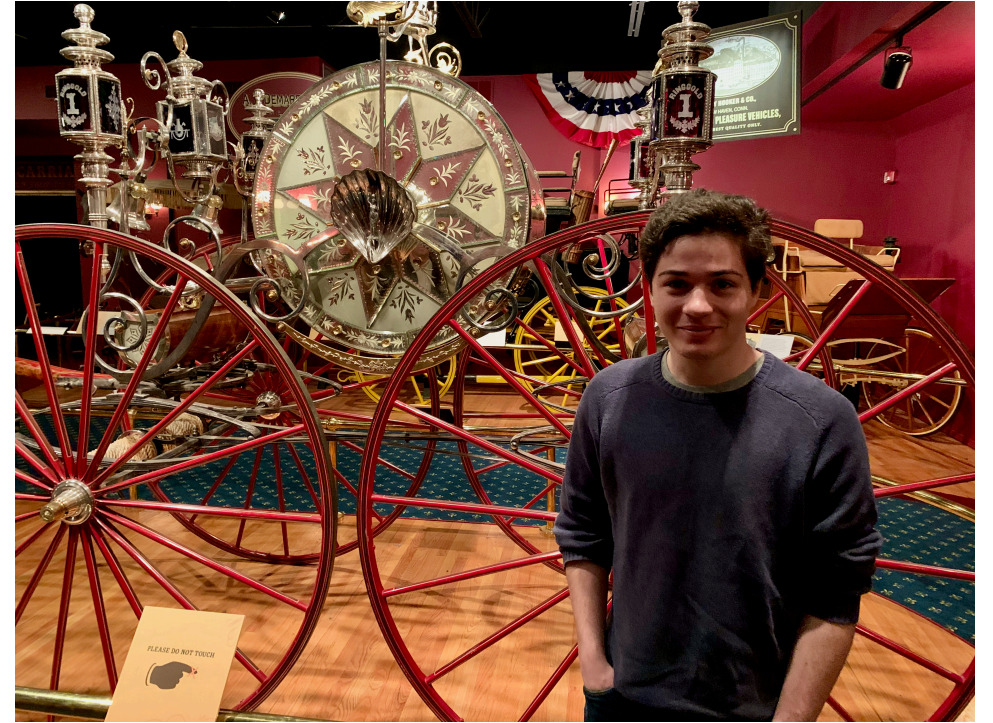
# CODING FOR PROGRESS

"Benevolent computing" harnesses technology for a better world

[READ THE STORY →](#)

# Prior Work: The Long Island Museum

Student teams from the Benevolent Computing class have developed interactive multimedia exhibits for the LIM, as well as wayfinding applications. Fieldwork is an important aspect of the development process.

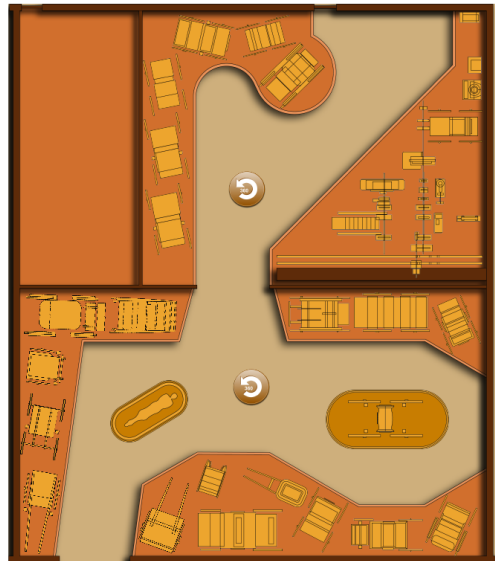


# Long Island Museum Interactive Exhibits



# Long Island Museum Wayfinding

## THE CARRIAGE MUSEUM Factory Gallery



### DIRECTORY

- VISITOR CENTER
- MELVILLE GARDENS
- CARRIAGE MUSEUM**
- HERB GARDEN
- FACTORY GALLERY
- SCHOOLHOUSE
- ROCKAWAY GALLERY
- BLACKSMITH SHOP
- BARN
- CARRIAGE SHED
- BURIAL GROUND
- ART MUSEUM



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### MY ITINERARY

# The Jazz Loft Online Archive

The Jazz Loft presents a number of interesting challenges because of the variety of assets in its collection. From documents and photographs, to recordings and objects, the design of the database has to accommodate many types of queries and displays. However, the pandemic has limited the amount of fieldwork students can do. Lectures were delivered from the Jazz Loft using Zoom.



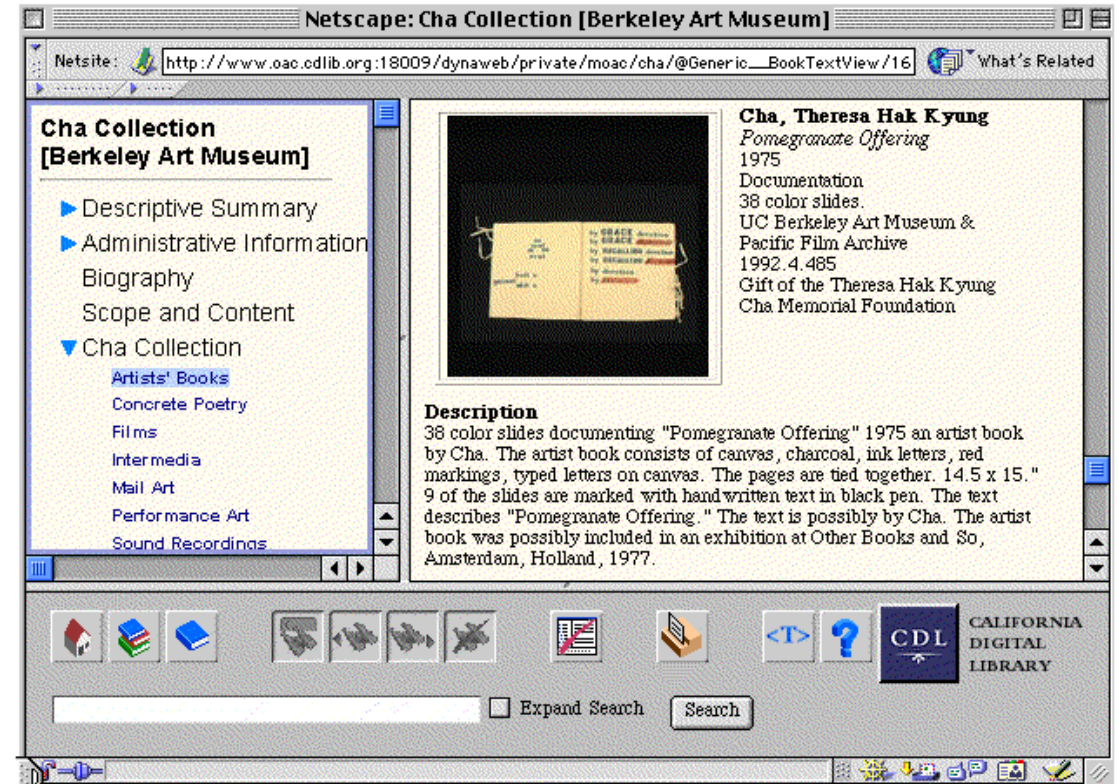


# Fieldwork during a pandemic

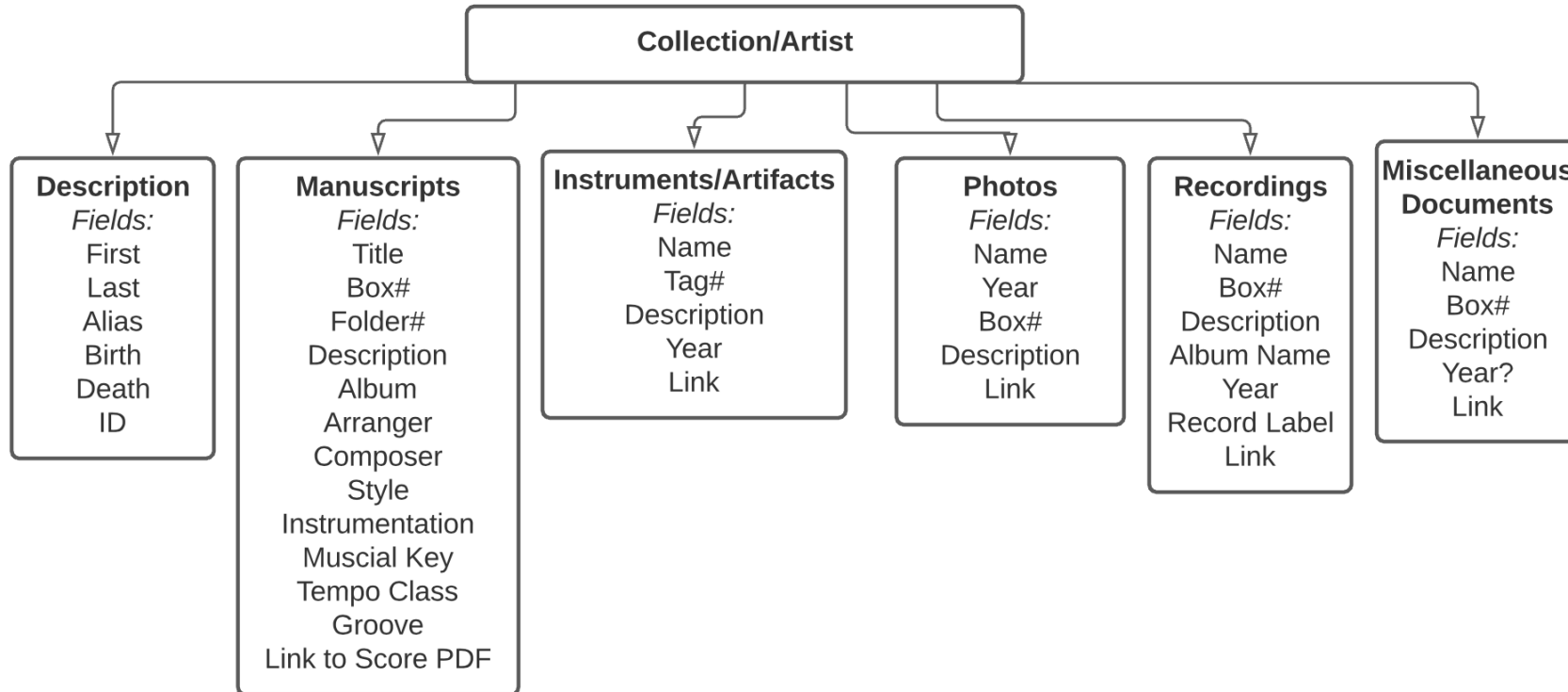


# The Museums Online Archive of California & the Digital Asset Management Database

In 2000 the Institute of Museum and Library Services funded the development of a digital asset management database to be shared collaboratively by the MOAC partners, which included UC Berkely, the Oakland Museum, the Hearst Museum, the San Francisco Museum of Modern Art, and many other institutions. They chose FileMaker as the development toolkit. The software's ease of use for administrators and its cross platform support was cited in the decision.



# Database Schema



## File Naming Conventions:

**Song:** ScoreTitle\_B#F#

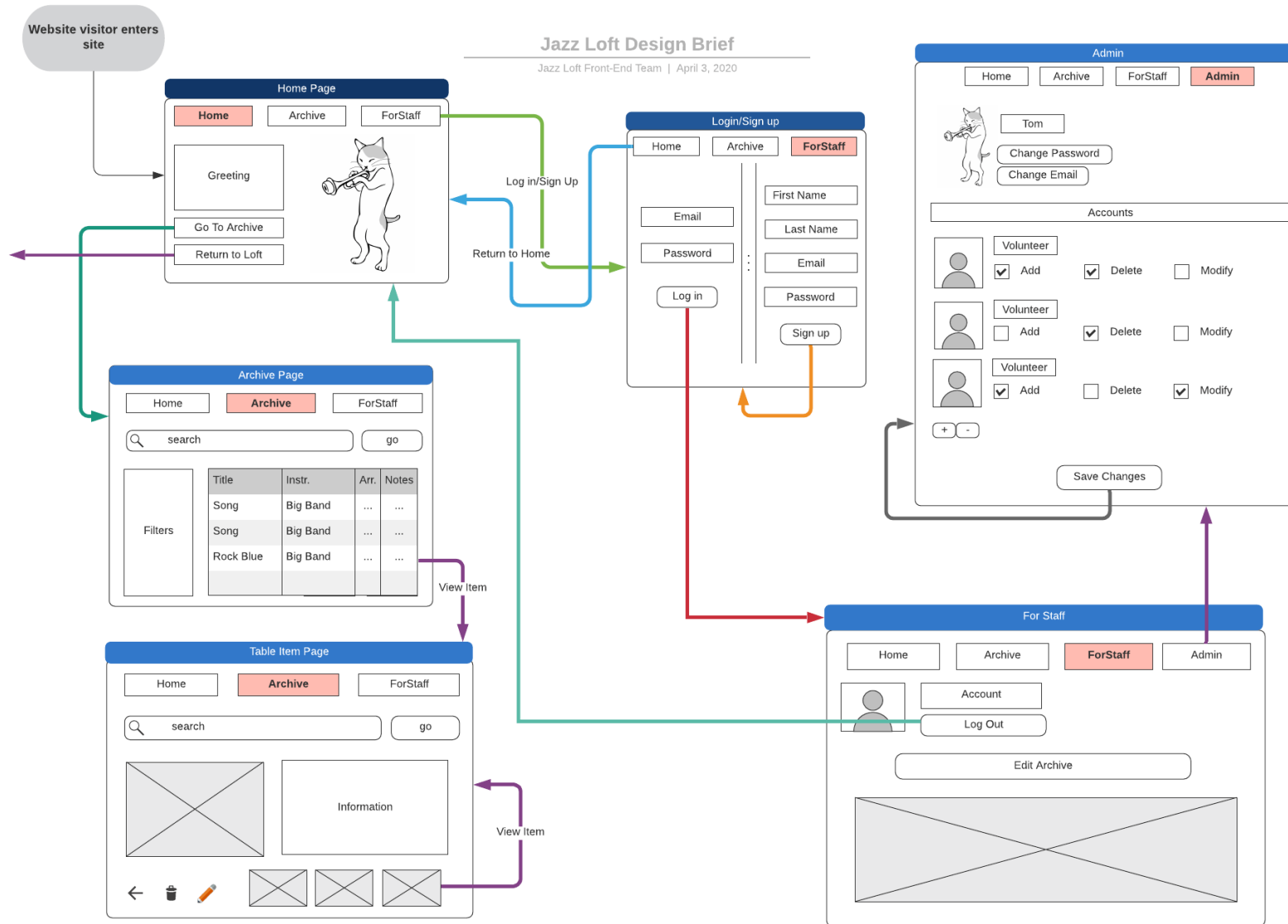
**Instruments/Artifacts:** Description\_T#

**Photos:** Description\_B#

**Recordings:** Description\_B#

**Documents:** Description\_B#

# Wireflow



# Digitizing Assets



# Multiple media types, formats, and resolutions

## Documents (manuscripts, photos)

300 dpi for download (pdf files for scores, png files for photos)

72 dpi for display (photos)

thumbnails for search results (photos)

## Audio recordings

256 kbps mp3 files for archival purposes, 128 kbps for search results

## Video recordings

1080p mp4 files for archival purposes, 720 X 480 for search results

3D data will be displayed as glb files

Binary data will not be stored in the database, but will be linked to search results

The directory structure for storing binary data will mirror the database schema



# Database Prototype



# Creating a “virtual visit” user interface





# Capturing 3D data



# References

## **The Museum Computer Network**

<https://mcn.edu/wp-content/uploads/2020/11/History-of-MCN.pdf>

## **Benevolent Computing**

<https://www.stonybrook.edu/magazine/2018-winter/computing-for-social-good>

## **MOAC**

<https://archive.bampfa.berkeley.edu/media/MOACAnalysis.pdf>

## **Jazz Loft Virtual Visit**

[https://www3.cs.stonybrook.edu/~tony/JazzLoft/jazzloft\\_VR/](https://www3.cs.stonybrook.edu/~tony/JazzLoft/jazzloft_VR/)

## **Jazz Loft Online Archive**

<https://xsrv2.mm.cs.stonybrook.edu/fmi/webd/JazzLoft2021>

# Questions?



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