

INTERACTIVE 3D ARCHITECTURE WEBPAGE LOGAN COUNTY

PROJECT INTRODUCTION

The city of Sterling, Colorado was established in 1881. The implementation of the railroads had a strong influence on building function and design in the city. Today, Downtown Sterling has many historically significant buildings that have been standing for around 100 years. These buildings have all influenced the community and they each have important historical backgrounds.

Not only did these buildings contribute heavily to the creation and economic growth of the city, but they also still offer educational opportunities in their history and architecture. The buildings have distinct classical architectural styles commonly found in the late 1800s to early 1900s. While some of the buildings remain similar to when they were first built, others have remodeled interiors making them relevant in Sterling today. Despite these changes, community members, students, teachers, and stakeholders can all learn more about Sterling from its historic buildings.

BACKGROUND

A few contributing factors influenced this project. The most important was the switch to online learning during the COVID pandemic. Providing students of all ages with a wider variety of information technology benefits them in many situations. As two studies of digital learning engagement found, all students will benefit from educational enhancements that include digital technology (Hietajarvi et al., 2020; Ullah & Anwar, 2020)

Another contributing factor to this project is public engagement with information technology. In a study by Hanzl (2007), information technologies such as augmented reality provided community members with the possibility of participating in urban planning. Public participation can enhance the quality of life for community residents, bringing better resource allocation, reduced conflict, and improved organizational decisions (Bassler et al., 2008). Two great ways to encourage such participation are to provide educational opportunities for the public and to combine virtual tourism experiences that will help strengthen interest and pride in historic buildings.

The final contributing factor in the making of this project was the encouragement of tourism through technology. One study found that information communication technologies provide new tools for marketing, which supports the interactivity between tourism and consumers (Buhalis, 2008). Implementing this type of technology helps strengthen tourism by increasing its competitiveness. This increase draws more tourists and attention to the subject of interest, in this case Sterling's historic buildings, and places more importance on maintaining the structures and providing tourists with activities.

INTERSHIP GOALS

1. Determine (with mentor guidance) which historic buildings to highlight on the pilot webpage.
2. Utilize 360 video camera capabilities to capture virtual tour content of buildings via Matterport.
3. Research the historic buildings and embed the research into the tours via Matteredtags.
4. Integrate inclusive website principles in all webpage content.
5. Present to community stakeholders.

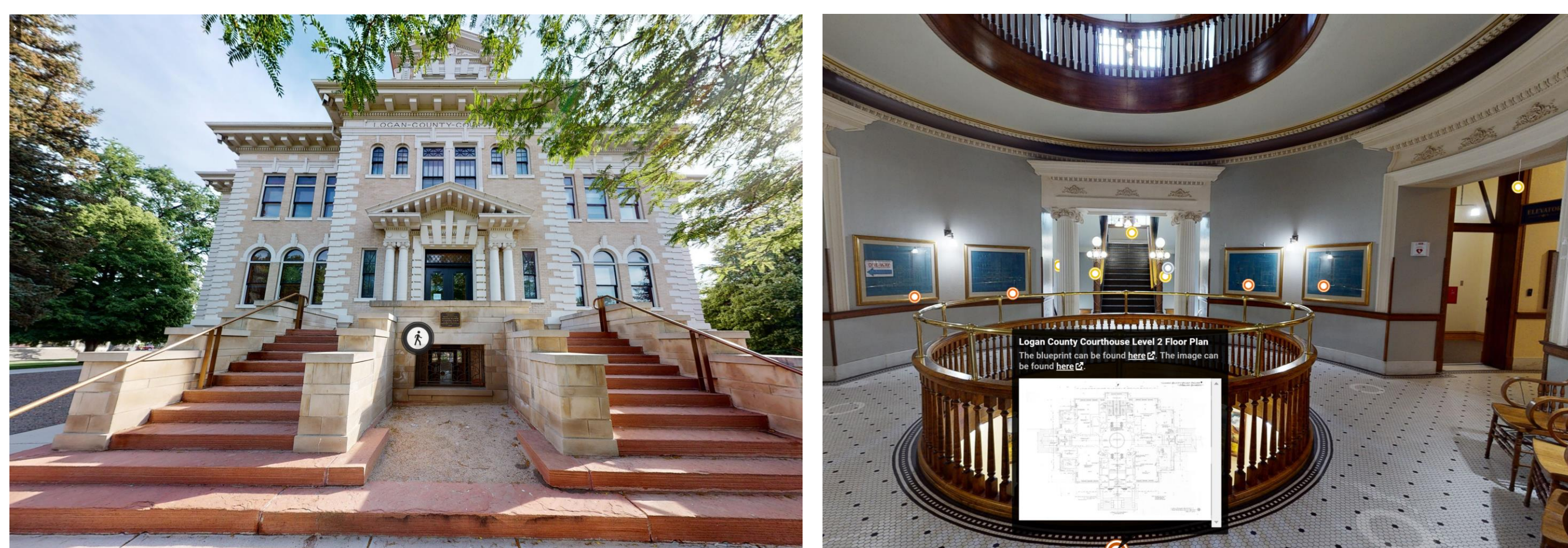
WHAT YOU DID

I completed this project in three parts. The first part was research collection. This involved using all available resources, including collections from Sterling community members, to gather information on each building. Narrowing down which buildings to focus on was a part of this step, along with reaching out to building owners to schedule visits.

The second part of the project was imaging. Using the Matterport Pro2 camera, I scanned the nine selected buildings. This was done over a period of four trips out to Sterling and involved repeatedly scanning each building section-by-section so the program would lay out the building. The building layouts were then uploaded to my Matterport account where they were processed.

The final part of the project was editing. After the buildings were uploaded to Matterport, the program allowed me to edit the buildings. I had to think about how users would interact with the virtual space, which meant adjusting certain aspects of the preloaded model. I then focused on the implementation of Matteredtags. These tags allowed me to showcase more information about the buildings, such as architectural style and historical images. This information came from the research collection at the beginning of the project, as well as information found during the site visits. More specifically, this additional information helped enrich the Matteredtags. Many of the photos I took on-site I found information on online, such as Google Image searching a luminaire or painting. This all came together to create a virtual interactive visit that provides visitors with a valuable source of information.

Images of Logan County Courthouse



WHAT YOU LEARNED

I learned several new skills in the outcome of this project.

1. Learned information about the historic buildings in Sterling, Colorado to highlight on the pilot webpage.
2. Gained an understanding of 360 video camera capture capabilities by creating primary source virtual tour content for Colorado's historic buildings via Matterport.
3. Learned about the context of the development of historical buildings and tours via Matteredtags.
4. Learned how to integrate inclusive website principles in all webpage content.
5. Acquired presentation skills through presentation to community stakeholders.

HOW DOES THIS APPLY TO YOUR EDUCATION

I am currently pursuing my bachelor's degree in Interior Architecture and Design at CSU. As a part of this program, we have been trained to stay up to date on technological advancements that would be useful in our field. Learning how to utilize Matterport will allow me flexibility in how I choose to approach projects and experiences. This internship has also allowed me to practice my training in listening and learning from the community. Many of our projects are directly influenced by the surrounding cultures. Learning about Sterling and experiencing it in person has helped me to understand just how instrumental spaces are in shaping a community. This internship has helped to prepare me for the next step in my career, whether it be at a company or pursuing a master's degree in Interior Architecture.

NEXT STEPS

There are several steps available to continue this project. Expanding on the information provided could be a great way to enhance the virtual experience and allow other students to work with the Sterling community and technology. Another step could be to present to surrounding communities in Logan County as well as students at CSU to promote historic preservation and virtual education. The most significant step could be to expand this project to other cities and towns across Colorado with a rich architectural history. This project could provide these communities with similar opportunities to Sterling, like educational engagement and tourism encouragement.

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