

## **Project Milestone 7**

**Title:** Artscape

**Who:** Elizabeth Eyeson, Kevin Busch, Sophie Ciulla, Timothy Vaught, Ziqi Zhao, Fengwei Zhang

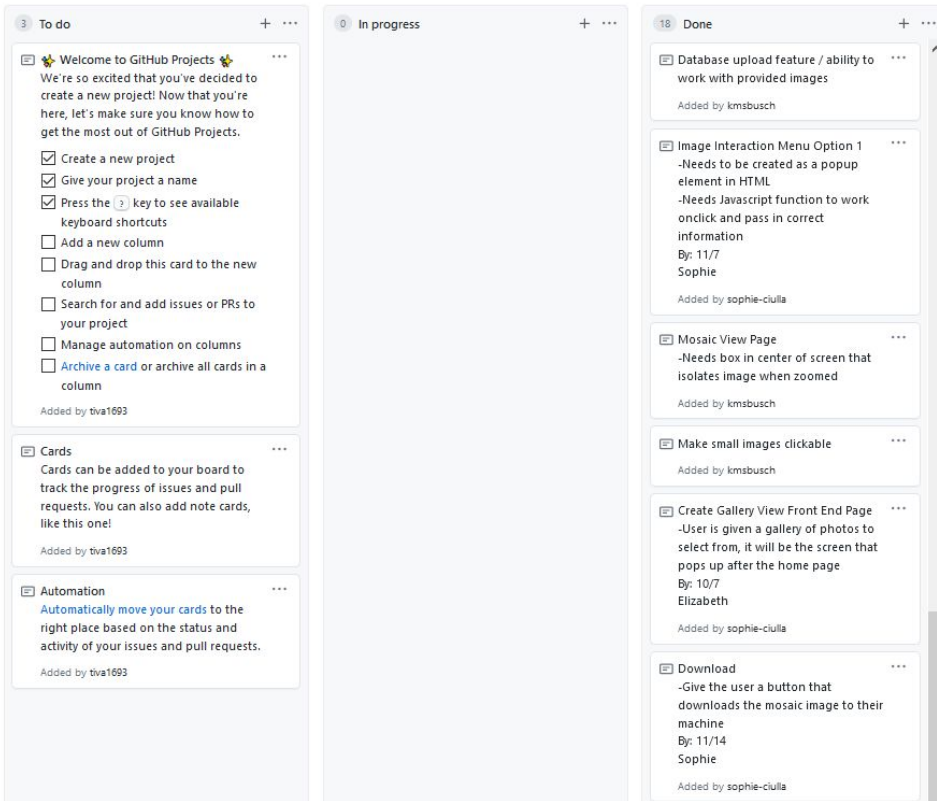
### **Project Description**

Artscape was born out of an idea to provide users with an “artistic escape” through a hyper personalized art gallery experience. In the early stages of our project, a consistent theme that came up was finding a way to center our application around the user’s creativity and curiosity in a manner that would enable them to explore the limits of the art they are both currently looking at and would like to observe next. This led us to the following realization: *What better way to achieve this than letting the user play the role of both the artist and the audience while they explore and adventure in an artistic environment?*

We brought this idea to life through creating an application that allows users to create a beautiful and dynamic mosaic photo that is comprised of thousands of smaller photos from a large database of photos. The mosaic is highly interactive with the smaller individual photos being clickable in addition to a zoom-in feature that allows for enhanced user interaction. By analyzing the photos in the database as well as the larger selected image, and grouping them into similar colors, the algorithm generating the mosaic creates an accurate representation of the selected photo. The user can then repeat the process and fall down the artistic rabbit hole, if you will, allowing them to have a unique experience with each individual piece of art that they interact with.

### **Project Tracker**

<https://github.com/CSCI-3308-CU-Boulder/209-5-FA20/projects/1?fullscreen=true>



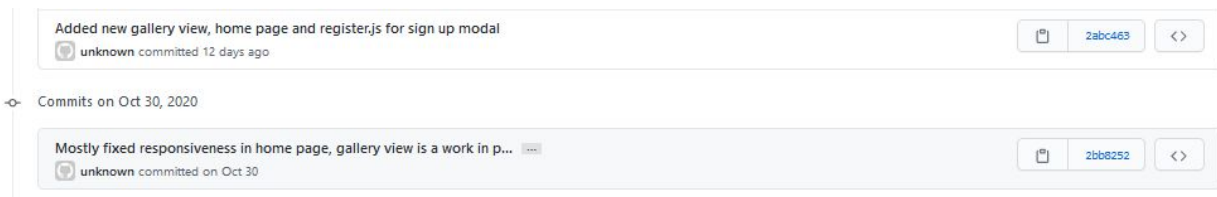
## VCS

<https://github.com/CSCI-3308-CU-Boulder/209-5-FA20>

## Contributions

\*Each member should provide screenshots of their commits and provide a brief description of technologies worked on and features that were contributed to

**Elizabeth:** My primary focus on this project was developing the visual aesthetics of the home page and gallery view. I designed the layout and color theme of the home page and gallery view. The technologies I used to accomplish this included HTML/CSS and Javascript. I also contributed to the logical flow of the user experience: logging into their account or creating a new one, selecting or uploading an image and continuing to the mosaic view.



Commits on Oct 16, 2020

Added extra features to mosaic\_view.html  
unknown committed on Oct 16

00d7794 <>

Commits on Oct 15, 2020

Merge pull request #10 from CSCI-3308-CU-Boulder/Elizabeth  
lizagit committed on Oct 15

Verified

ce6c479 <>

Added home\_page and gallery\_view  
unknown committed on Oct 15

c4cca84 <>

Added backgrounds for gallery view  
unknown committed 12 days ago

7fdb934 <>

Added new gallery view, home page and register.js for sign up modal  
unknown committed 12 days ago

2abc463 <>

**Sophie:** In the beginning of the project we thought it would be cool to have a menu that would open when each individual photo of the mosaic was clicked. My role was working on this menu and making it functional in css, html, and javascript. The menu worked and looked fine but it turned out to be too hard to export the metadata from the photos in the database and send it to the menu function. We ended up not using this feature but if we had more time it would be something we would like to implement to its full potential. After this I worked on overall touch ups to the project.

Commits on Oct 26, 2020

Delete .DS\_Store  
sophie-ciulla committed on Oct 26

Verified

7bf5e3d <>

Delete .DS\_Store  
sophie-ciulla committed on Oct 26

Verified

33c2327 <>

Delete .DS\_Store  
sophie-ciulla committed on Oct 26

Verified

4dc3166 <>

Delete .DS\_Store  
sophie-ciulla committed on Oct 26

Verified

65a1e95 <>

added menu functionality  
sophie-ciulla committed on Oct 26

6270030 <>

added menu functionality, download button not in right place  
sophie-ciulla committed on Oct 26

88abb50 <>

**Sky:** My primary focus on this project was developing the main mosaic algorithm. The technologies I used to accomplish this is Python. After I rewrote the main mosaic algorithm, I found the performance was so poor, such that Kevin developed a new algorithm. Kevin's version turned out pretty well so we decided to use his algorithm. I also contributed to the appearance of the login/registration page through The technologies I used to accomplish this included Javascript, CSS and HTML.


Commits on Nov 30, 2020	<div> Add files via upload ... Sterben-01 committed 7 days ago Verified 687f7f8 &lt;&gt; </div>
Commits on Nov 26, 2020	<div> Add files via upload Sterben-01 committed 12 days ago Verified 8394107 &lt;&gt; </div> <div> Add files via upload Sterben-01 committed 12 days ago Verified 68c5f8c &lt;&gt; </div> <div> Add files via upload Sterben-01 committed 12 days ago Verified b70e12f &lt;&gt; </div>
Commits on Nov 20, 2020	<div> Delete index.html Sterben-01 committed 18 days ago Verified dae3f96 &lt;&gt; </div> <div> Add files via upload Sterben-01 committed 18 days ago Verified b2f5ffb &lt;&gt; </div>
Commits on Nov 17, 2020	<div> Update index.html Sterben-01 committed 21 days ago Verified 0f08fd1 &lt;&gt; </div> <div> Update index.html Sterben-01 committed 21 days ago Verified b94f41d &lt;&gt; </div> <div> Add files via upload ... Sterben-01 committed 21 days ago Verified c9b3c8a &lt;&gt; </div>
Commits on Oct 17, 2020	<div> Update main.py Sterben-01 committed on 17 Oct Verified 20bef72 &lt;&gt; </div> <div> Add files via upload ... Sterben-01 committed on 17 Oct Verified a4844f9 &lt;&gt; </div>


**Jerry:** Focus on mosaic algorithm with sky. My job is to find a mosaic solution with the sky. At the beginning, I and sky tested almost all algorithms about the mosaic part, and we modified the algorithms to also add the 'tracker'. Just like the sky said, the performance is not great. I had tried to use several ways to improve the performance such as: change the array to matrix, using dynamic array, using pointer. But that way still does not work. Some of those still have a poor performance, some of those appear to have some bugs. So we talked with Kevin and decided to use his mosaic function.

Regarding my Github upload record: Because most of my work is done with sky, so my work and file upload are done by him(mosaic function part), that's the reason why you can only see sky's upload record.

**Kevin:** At the beginning of the project, I mainly focused on how to host our website, and then spent time on setting up the PythonAnywhere environment with our pages to run. After that, I went back and forth between integrating front end pages that other team members pushed to Github, into the site, and working on the main algorithm in the backend. I was in charge of the website environment, so I needed to be the one to integrate every piece from Github.


Final version after presentation -Kevin Contribution


 kmsbusch committed 3 days ago

 5a376da <>


Commits on Dec 2, 2020


forgot to add css file -Kevin

 kmsbusch committed 5 days ago

 0e92f0e <>


12/2 updated site components -Kevin's contribution


 kmsbusch committed 5 days ago

 a98b511 <>

Commits on Nov 6, 2020

files from pythonanywhere site -Kevin's contribution

 kmsbusch committed on Nov 6

 d9297d6 <>

**Tim:** At the start of the project I focused on helping with figuring out the mosaic function we were using as well as trying to get an idea on how to implement a reshuffle feature. I had originally designed the mosaic view page however Sophie also designed one and we decided to go with hers. Near the end of the project I focused mainly on implementing the zoom in feature which is in the current project. I made several zoom features and the best one is the one committed to Github. I also spent a lot of time researching a map like the zoom in feature which did not work out.

## Adding zoom feature files #11

Edit Open with ▾

Merged tiva1693 merged 1 commit into master from Tim on Oct 30

Conversation 0 Commits 1 Checks 0 Files changed 1

+103 -0



tiva1693 commented on Oct 30



No description provided.

Add files via upload

Verified c20fcfb

tiva1693 merged commit d9339b9 into master on Oct 30

Revert



Pull request successfully merged and closed

Delete branch

You're all set—the Tim branch can be safely deleted.

Reviewers	⚙️
No reviews	
Assignees	⚙️
No one—assign yourself	
Labels	⚙️
None yet	
Projects	⚙️
None yet	
Milestone	⚙️
No milestone	

### Challenges

The first challenge we encountered was overcoming the learning curve of using languages and tools like HTML/CSS and Flask. Many of us did not have advanced experience with these tool so trying to design a functional project while simultaneously “learning the ropes” was difficult at times.

The second challenge was there being a lack of similar products we could draw inspiration from. The “reshuffling” functionality was original and thus required us to create an algorithm from scratch.

The third challenge we encountered was the lack of in-person communication and collaboration due to COVID19. Though we were able to supplement some of the collaborative experience through platforms such as Discord and Groupme, it was still difficult collaborating on code remotely especially when considering factors such as different time zones .

The final challenge we encountered was Python Anywhere’s lack of a free multiple collaborator option . However, we were able to get around this issue through regular communication and commits.

### Deployment

**Link to Environment:** <https://www.pythonanywhere.com/>

**Link to Project in Environment:** <https://kmsbusch.pythonanywhere.com>