

Front-end/Backend report

1. The current state of the project:
 - a. The following **front-end features** have been implemented:
 - i. Sample images uploaded and their alignment changed.
 - ii. Home button added to index.html (redirected page).
 - iii. Background size adjusted for WaterColourConverter.html (main page).
 - iv. Description area format fixed.
 - v. ">" appearing in the dropzone is removed.
 - vi. Alignment problem when zoomed in and out fixed.
 - b. The following **backend features** have been completed:
 - i. Images deleted in the image preview are deleted server-side as well
 - ii. All uploaded images are deleted from the server when the user refreshes the page and the image preview disappears
 - iii. Home button in index.html redirects to main page
 - iv. Home button deletes all uploaded photos when pressed
2. Changes in milestone:
 - a. Milestone 3: The website should have a completed front-end and be ready to incorporate the model in the back-end.
 - b. Milestone 4: Our team decided to keep the website private, so AWS server related work will no longer be done in milestone4. For milestone 4, the project should have the model incorporated into the website and be posted on github in html form. A README file or video will be uploaded to show how to use the watercolour painting converter.
3. Current challenge
 - a. Combine website part and ML part.
 - b. Decide which format of instruction - README file or video instruction - will better explain how to use the converter.
4. A description of each component and how it was implemented
 - a. Sample image alignment has changed from flex direction of column to row. Then, the alignment problem of the small arrow image was fixed by setting vertical alignment to center.
 - b. Home button added to index.html (redirected page) in the same manner of creating a download button in the previous milestone. Only the colour was changed for better distinction.
 - c. Alignment problem when zoomed in and out fixed by setting width of each box to relative width - they are set as percentages.
 - d. Home button will redirect to the main page and delete elements in the upload folder for future conversion. This was by setting the button to redirect to a page "deleteUploads" when it was clicked which then used functions from the os Python library to delete all files in the upload folder. Once that was done, the page would redirect to the main page but since there is no template for the delete page, the only page the user will see being redirected to would be the main page
 - e. Images deleted in the image preview are deleted server-side as well. This was done by using an eventListener for when a file was removed and having the website redirect to the "deleteUploads" website mentioned in 4c.

- f. All uploaded images are deleted from the server when the user refreshes the page and the image preview disappears. This was done by calling the function used in the “deleteUploads” website right before a new photo is uploaded in the main page
- 5. The overall contributions of each member to the project
 - a. Front-end was done by Han
 - b. Back-end was done by Adriana

Machine Learning Report:

1. The current state of the project:
 - a. The model is finished training after 145 epochs and produces acceptable results with images.
 - b. The model does not produce very convincing results with video because of the inconsistency between each frame of the transformed video.
 - c. The model produces images with colours and style generally found in watercolour images while maintaining the features of the original image.
 - d. Since the model produces acceptable results with only 6 resnet blocks, the entire 9 blocks that were initially meant to be used will not be used.
 - e. To improve the model results, we normalized the images between -1 and 1, changed the relu layers into leaky-relu layers in the critic, changed the output layer in the generator to tanh, and added noise to the images.
2. Changes in milestone:
 - a. No changes
3. Current challenge
 - a. The current challenge is combining the model with the website.
 - b. A secondary challenge is having the model work with videos, but this is less important than combining the model and website.
4. A description of each component and how it was implemented
 - a. The normalization of the images was done through a pytorch transform which normalizes the images right before they are used in the model.
 - b. Noise was added to the images by defining a GaussianNoise transform. This was then applied to the images along with the other pytorch transforms.
 - c. The change from relu to leaky-relu and to tanh as the output layer was simply done by changing the layers to different ones in the model.
5. The overall contributions of each member to the project
 - a. Both Adrienne and Harjot contributed to this part. We will both continue to help integrate the model into the website component of the project