Front-end/Backend report

1. The current state of the project:
    a. The following **front-end features** have been implemented:
        i. Procedures added to the Project description area.
        ii. Description and the sample images added to the Project description area.
        iii. The overflow of words has been fixed.
        iv. Area for sample images reserved, an image is added for a place holder, but will be changed when the model is ready.
        v. Redirected page (index.html) layout has been modified.
        vi. ‘Download’ button added to the redirected page.
    b. The following **backend features** have been completed:
        i. HTML elements (cloud icon and drag and drop text) are hidden once the user uploads a file and are un-hidden when the user removes a file
        ii. Removed some default HTML elements that came with dropzone.js (success and error checkmarks). This required using dropzone builtin functions to override the default image preview
        iii. Images now fit within the dropzone box
        iv. Made ‘Download’ button download result image when pressed
        v. Added server route for images that allows the frontend to display images that are hosted on the website
2. Changes in milestone:
    a. No changes
3. Current challenge
    a. remove “>” in the dropzone
        i. This was due to the source code used for dropzone. Will try to fix this for the next milestone.
    b. no video preview available when uploaded
        i. This might be done by snapshot preview for the video.
    c. Removing the image off the server when the image is removed off the website
4. A description of each component and how it was implemented
    a. CSS and HTML were used to build the layout of the WaterColourConverter.html and index.html. We now have two pages with a complete layout with all necessary components such as the download button and image area.
    b. Style of description area modified to have larger font size and darker colour. Overflow of the word has been fixed by setting overflow-wrap to break-word.
    c. The hiding and revealing of select HTML elements were done by using the .display function in Javascript as well as built-in events in Dropzone.js. Each element is identified in the HTML by a specific id and when a specific event is triggered the .display of that item is either ‘none’ or ‘block to hide or show that element. The events to trigger these functions were maxfilesreached (the maximum number of files is one so this works) and removedfile (self-explanatory)’
    d. Removing Dropzones’s default HTML elements was done using its previewTemplate configuration setting as well as personalized HTML which was the HTML that dropzone uses without the features that we didn’t want in there

    e. Images now fit in the Dropzone box using thumbnailHeight andthumbnailWidth options in Dropzone
    f. The ‘Download’ button is able to download by the embedding of a hyperlink into the button which downloads the html at a route that was set up in Flask that returns the result image
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. A few bugs relating to propagating the loss through the critics were resolved
    b. The critics now accept images of size 128 by 128
    c. Currently training and debugging the model so that it produces convincing watercolor images
    d. The model currently does not produce watercolor images with the right colors, although it does maintain the features of the original image.
2. Changes in milestone:
    a. No changes
3. Current challenge
    a. It takes very long to train the model to the point where we can see any meaningful results which makes debugging the model hard. This can be solved by training the model with different parameters on separate colab instances at once.
4. A description of each component and how it was implemented
    a. The loss was not propagating through the critics since the backwards() function was being called in an if statement that always evaluated to false
    b. An averaging pool was added to the critic to average the output tensor to 1 item. It was outputting a 5 by 5 tensor for each sample before which did not work with the cross entropy loss.
    c. The model is being trained with different parameters such as the learning rate to produce better results.
5. The overall contributions of each member to the project
    a. Both Adrienne and Harjot contributed to this part. We will both continue to train and debug the model until it produces convincing watercolor images.