

PHOTO EDITING - Development

CSE 611 – MS Project Development

Professor – Jinjun Xiong



TEAM MEMBERS

Pavana Lakshmi Venugopal

Saad Ahmed

Taraka Rohit Adusumilli

Ayesha Humaera



Updated Home Page

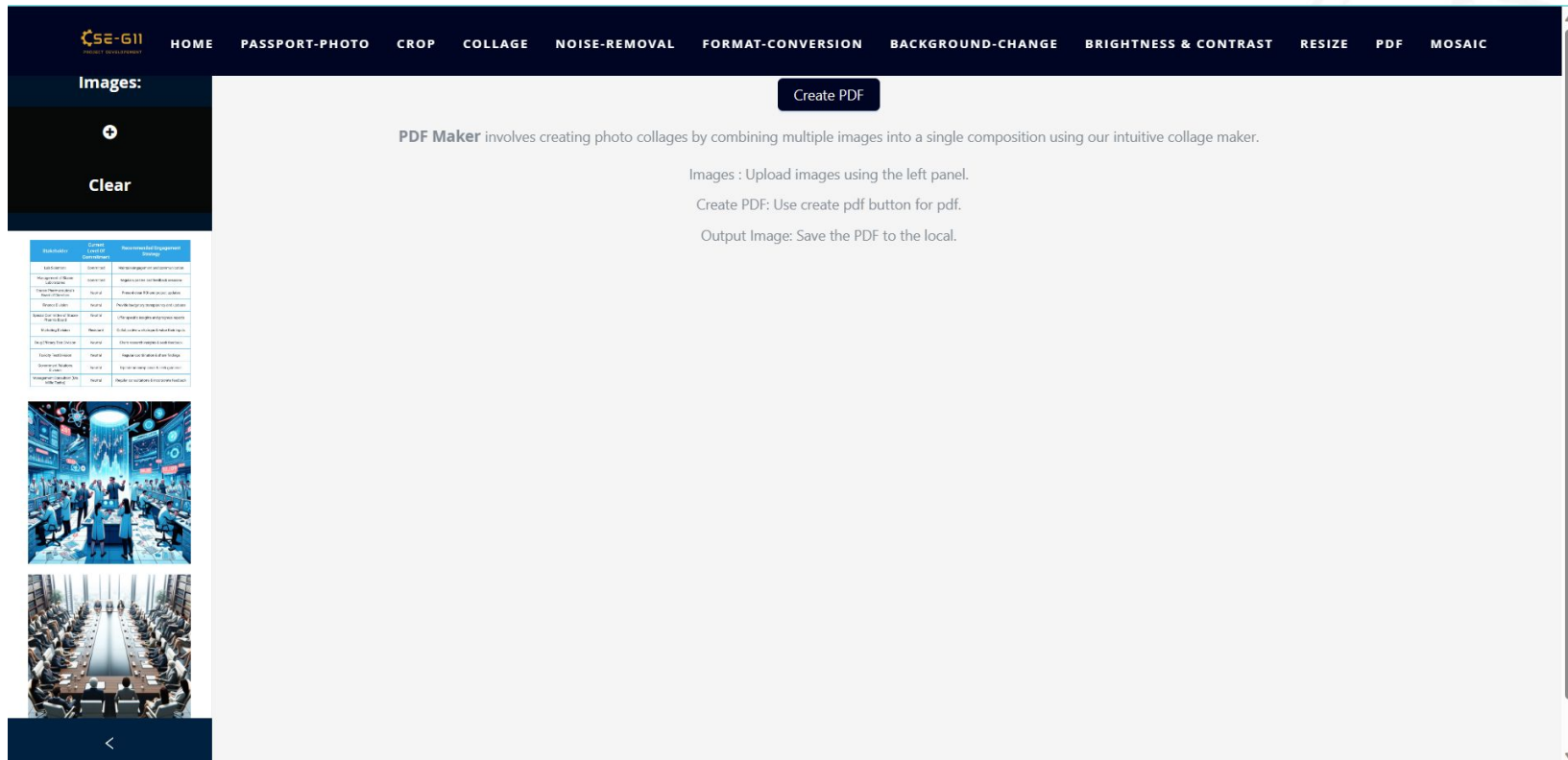


The screenshot shows the home page of a web application titled "Photo Editor". The page has a dark blue header with a logo on the left and navigation links "HOME" and "Features" on the right. The "Features" menu is open, showing a list of tools: PASSPORT-PHOTO, CROP, COLLAGE, NOISE-REMOVAL, FORMAT-CONVERSION, BACKGROUND-CHANGE, BRIGHTNESS & CONTRAST, RESIZE, MOSAIC, PDF, IMAGE COMPRESSION, and VIDEO COMPRESSION. The main content area has a large title "Photo Editor" and a paragraph describing the application's purpose and features. The background of the page features a faint, large watermark of the University at Buffalo seal.

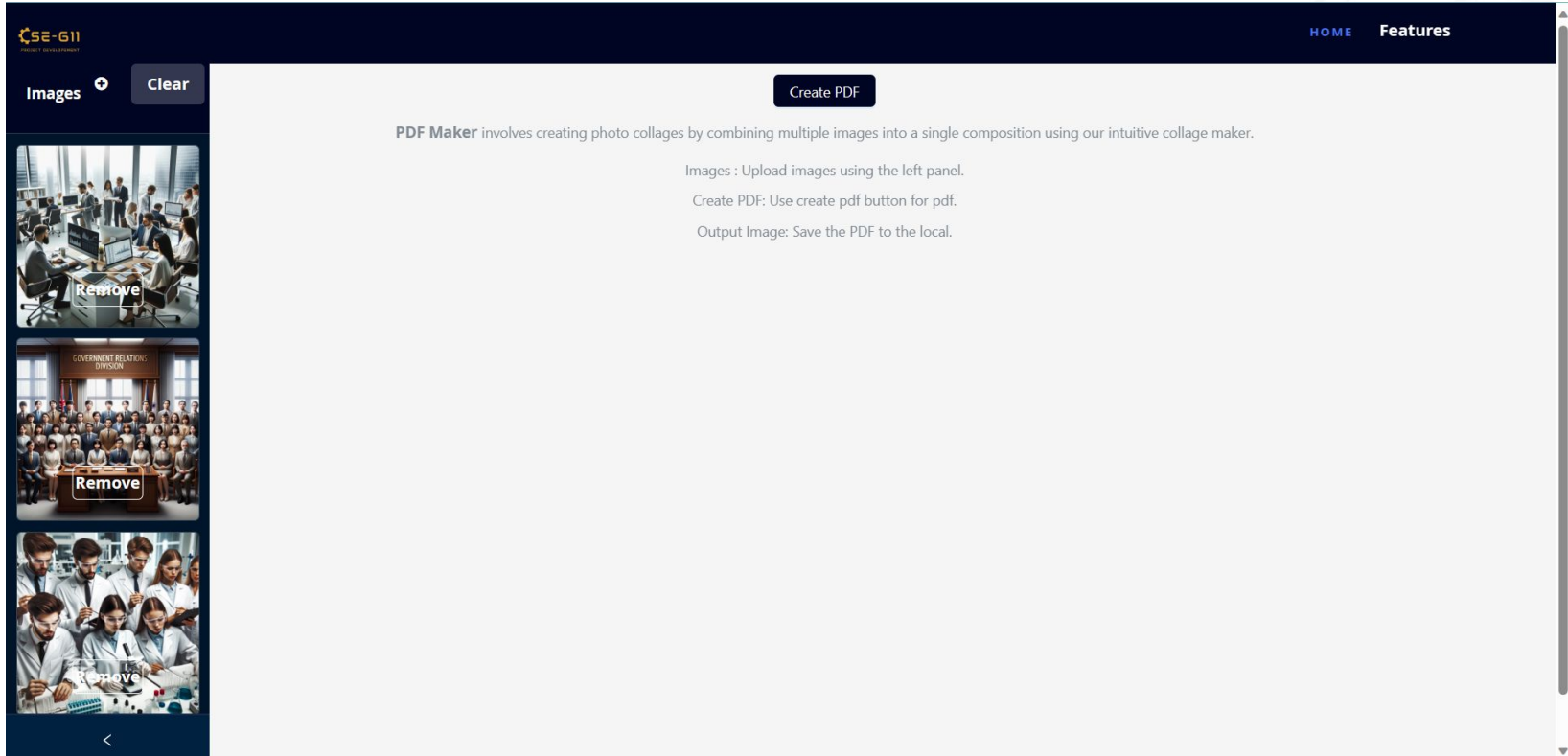
Photo Editor

The Photo Editor project is a web application designed to enhance and manipulate digital images. It allows users to edit and enhance their photos with a variety of tools and features, including cropping, resizing, adjusting brightness and contrast. The software is user-friendly, offering an intuitive interface and the ability to undo or redo actions. The project is aimed at individuals who want to improve their photos or use them for personal or professional purposes.


PDF Creator - Before Modernization and Fix



PDF Creator - After Modernization and Fix



Resize Image - Before Modernization and Fix



HOME

PASSPORT-PHOTO

CROP

COLLAGE

NOISE-REMOVAL

FORMAT-CONVERSION

BACKGROUND-CHANGE

BRIGHTNESS & CONTRAST

RESIZE

PDF

MOSAIC

Width (in pixels):

Height (in pixels):

Drag and Drop Photo

ⓘ

⬇️ Click or drag Photo to this area to upload

Resize Image involves changing the overall size of the image.

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Width: Use textbox in the left panel for width.
3. Choose Height: Use textbox in the left panel for height.
4. Preview and Download: Preview and download the photo.

Resize Image - After Modernization and Fix

SE-GII

Width (in pixels):

e.g. 1080

Height (in pixels):

e.g. 720

HOME

Features

Resize Your Image

Easily adjust its dimensions in a few steps:

1. Drag & Drop: Or simply upload your image.

2. Set Width: Input desired width on the left.

3. Set Height: Input desired height on the left.

4. Preview: Check the final look & download.

Upload Your Image

ⓘ

⌄ Drag & drop or click to upload

Resize Image - After Modernization and Fix

CSE-611

Width
(in
pixels):

e.g. 1080

Height
(in
pixels):

e.g. 720

>

HOMEFeatures

Resize Your Image

Easily adjust its dimensions in a few steps:

1. Drag & Drop: Or simply upload your image.

2. Set Width: Input desired width on the left.

3. Set Height: Input desired height on the left.

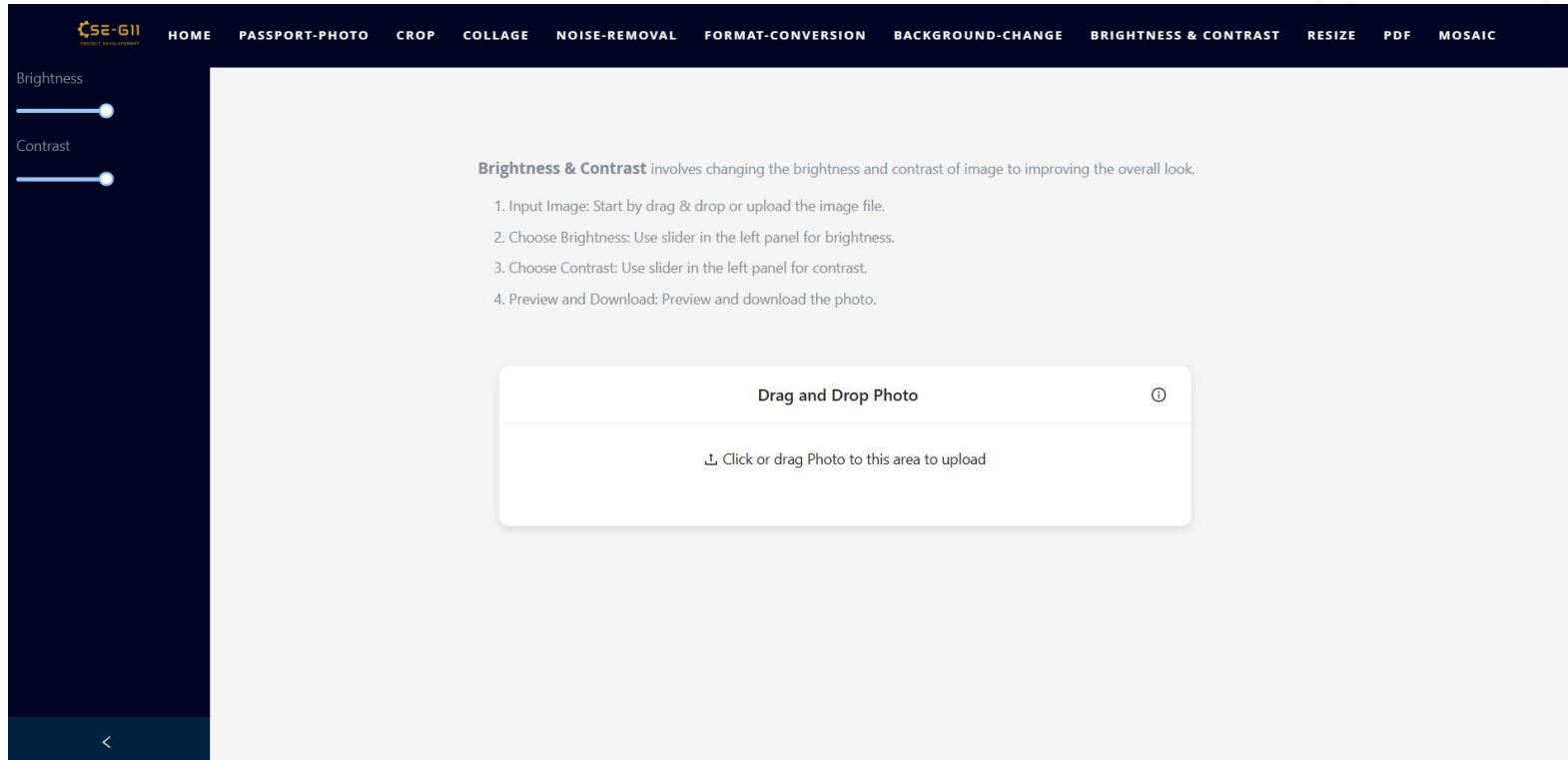
4. Preview: Check the final look & download.

Upload Your Image

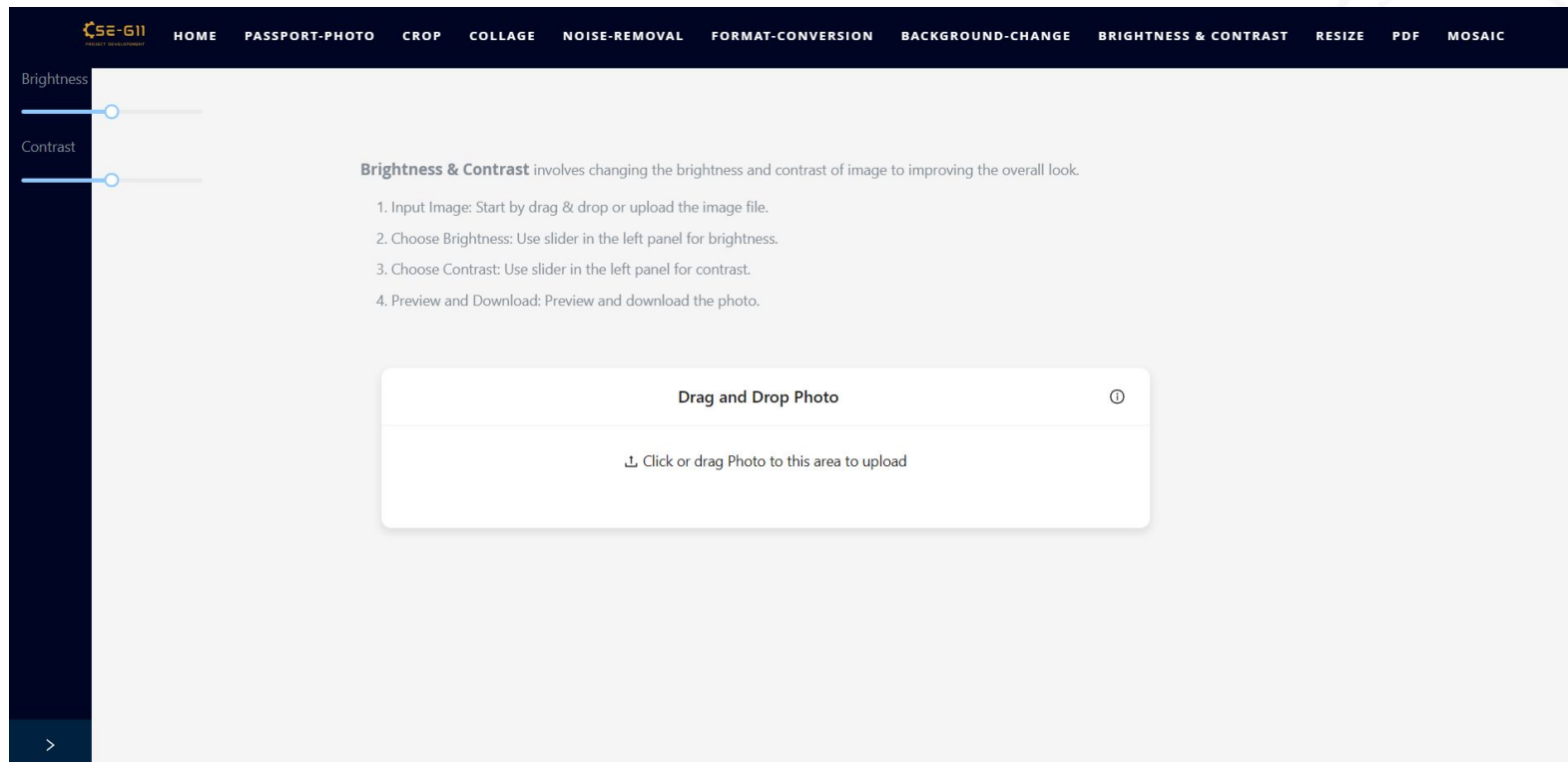
ⓘ

⌵ Drag & drop or click to upload

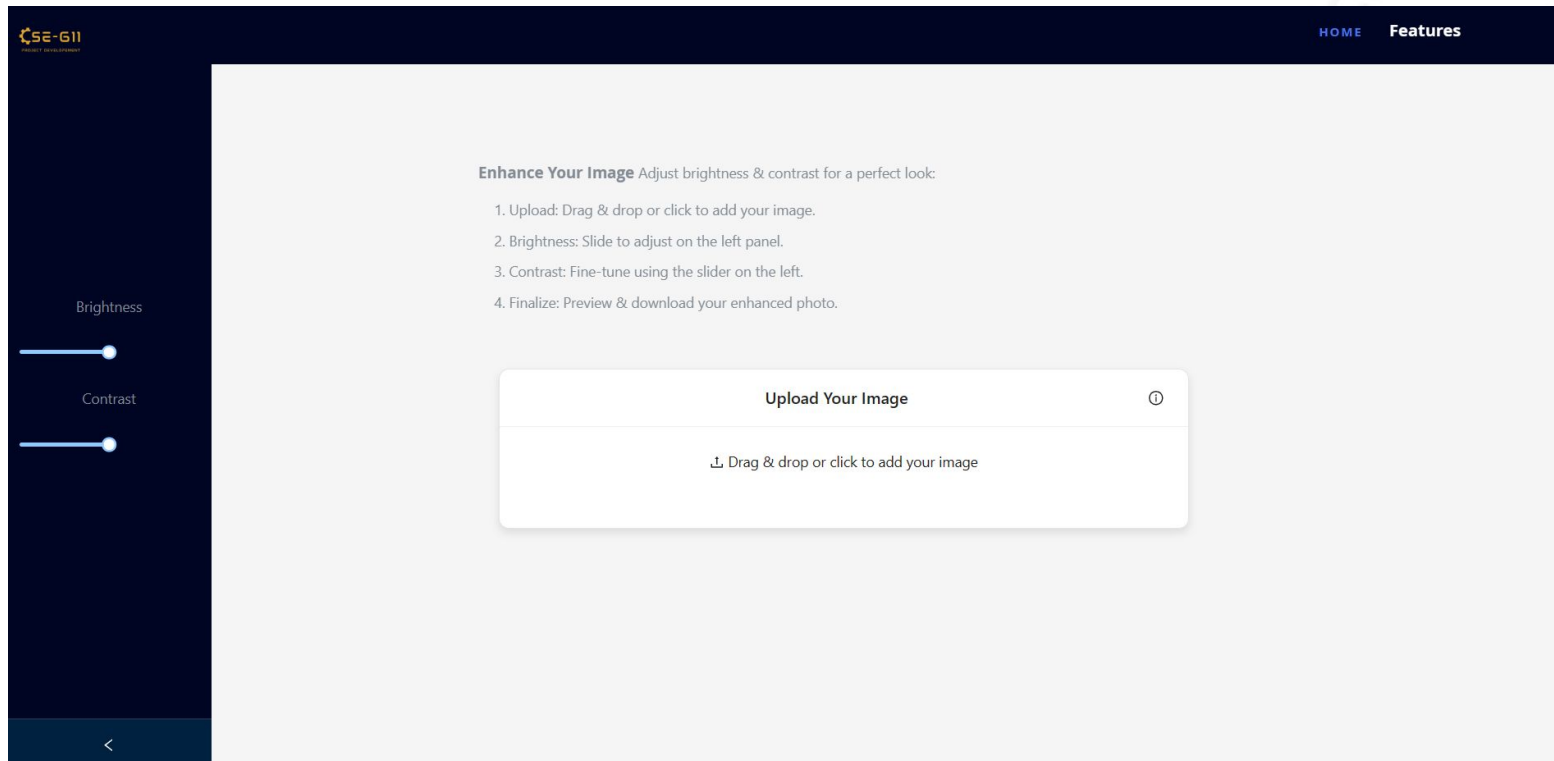
Brightness and Contrast - Before Modernization and Fix



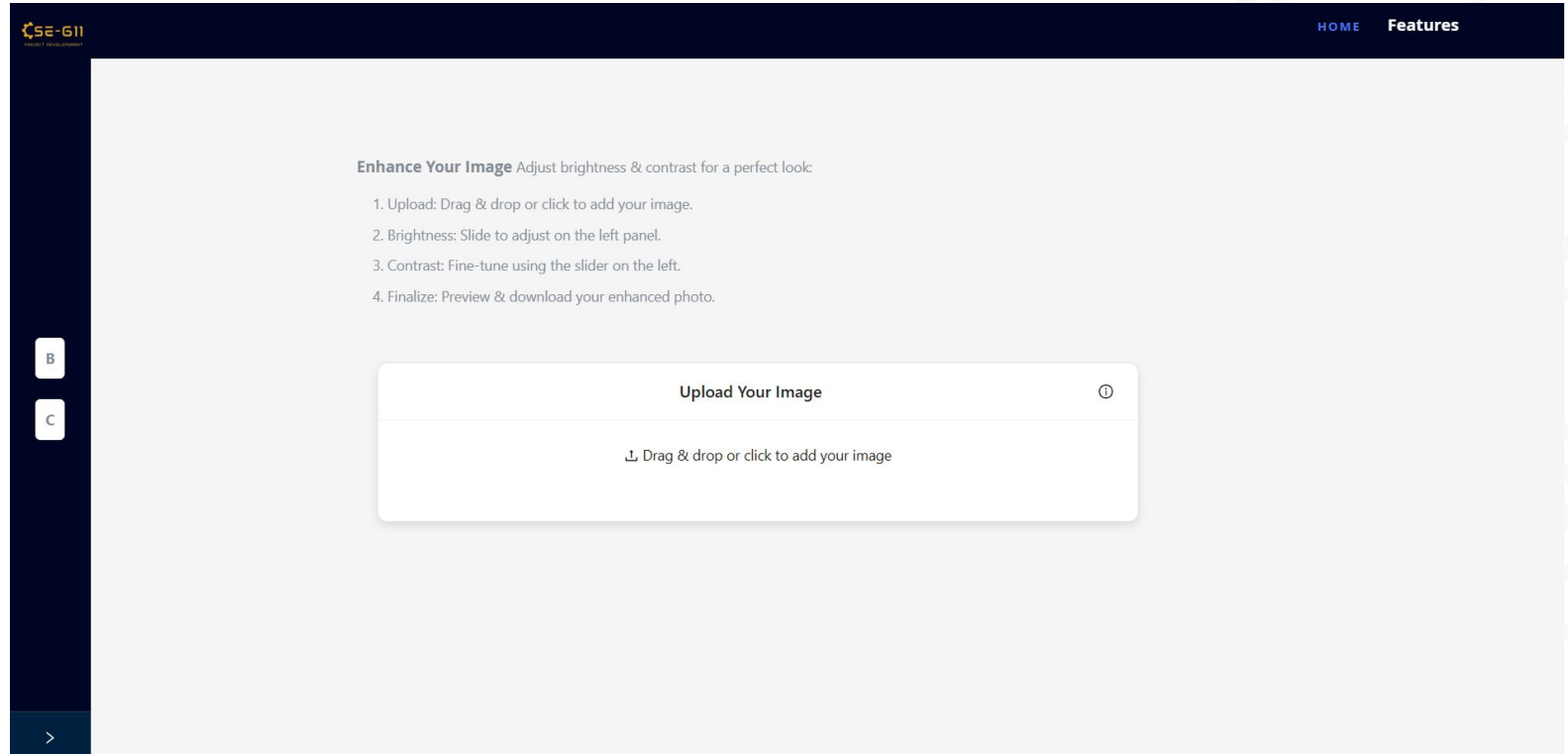
Brightness and Contrast - Before Modernization and Fix



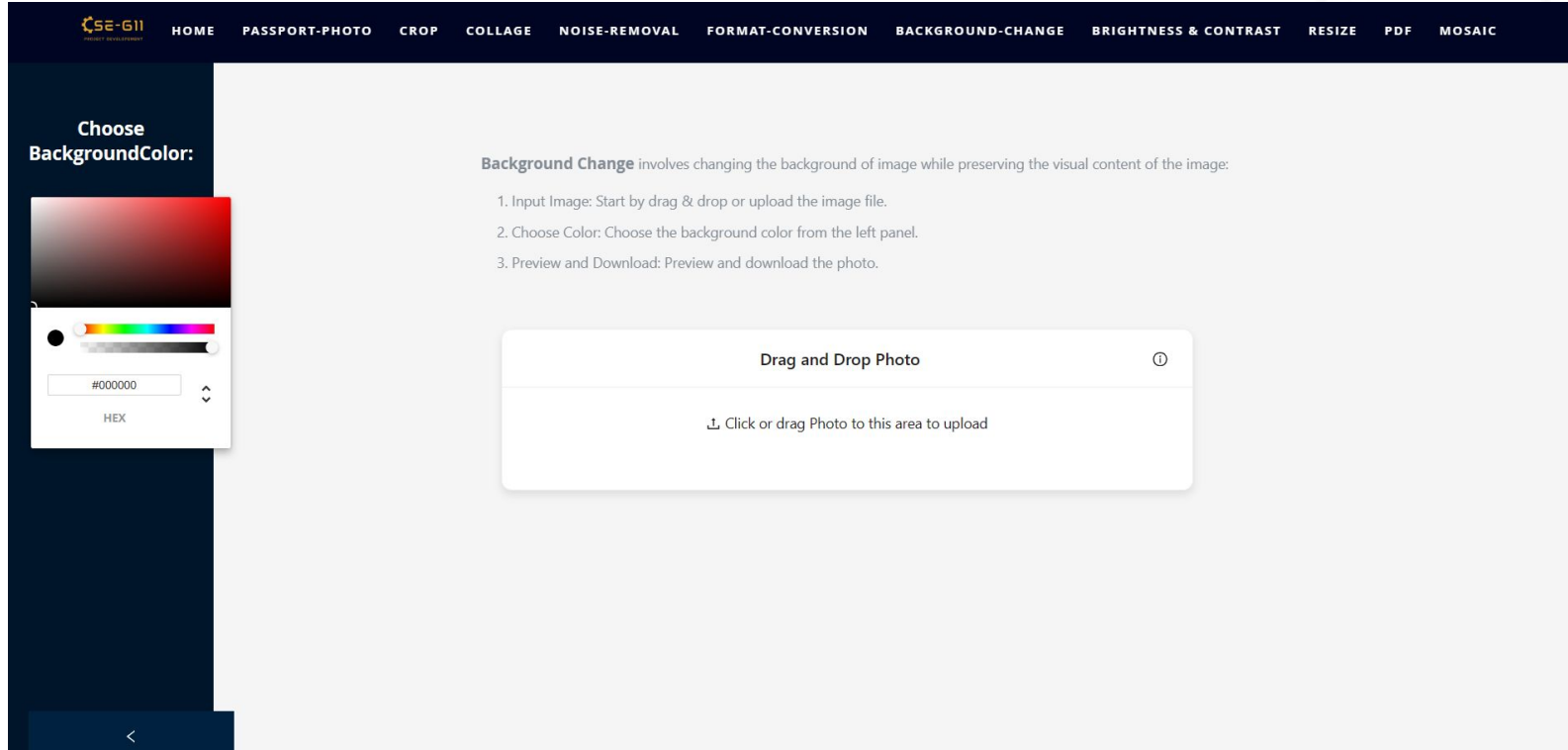
Brightness and Contrast - After Modernization and Fix



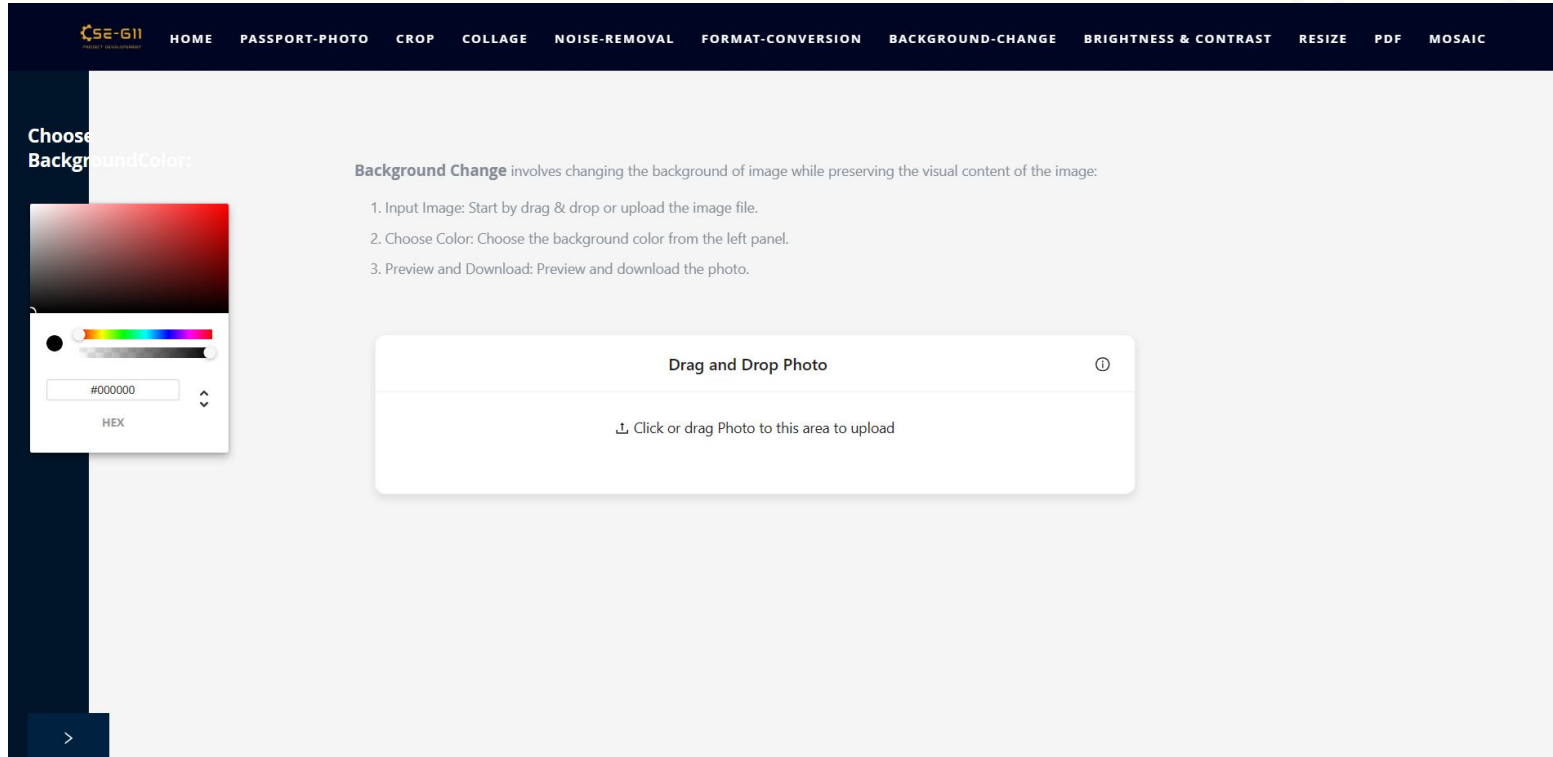
Brightness and Contrast - After Modernization and Fix



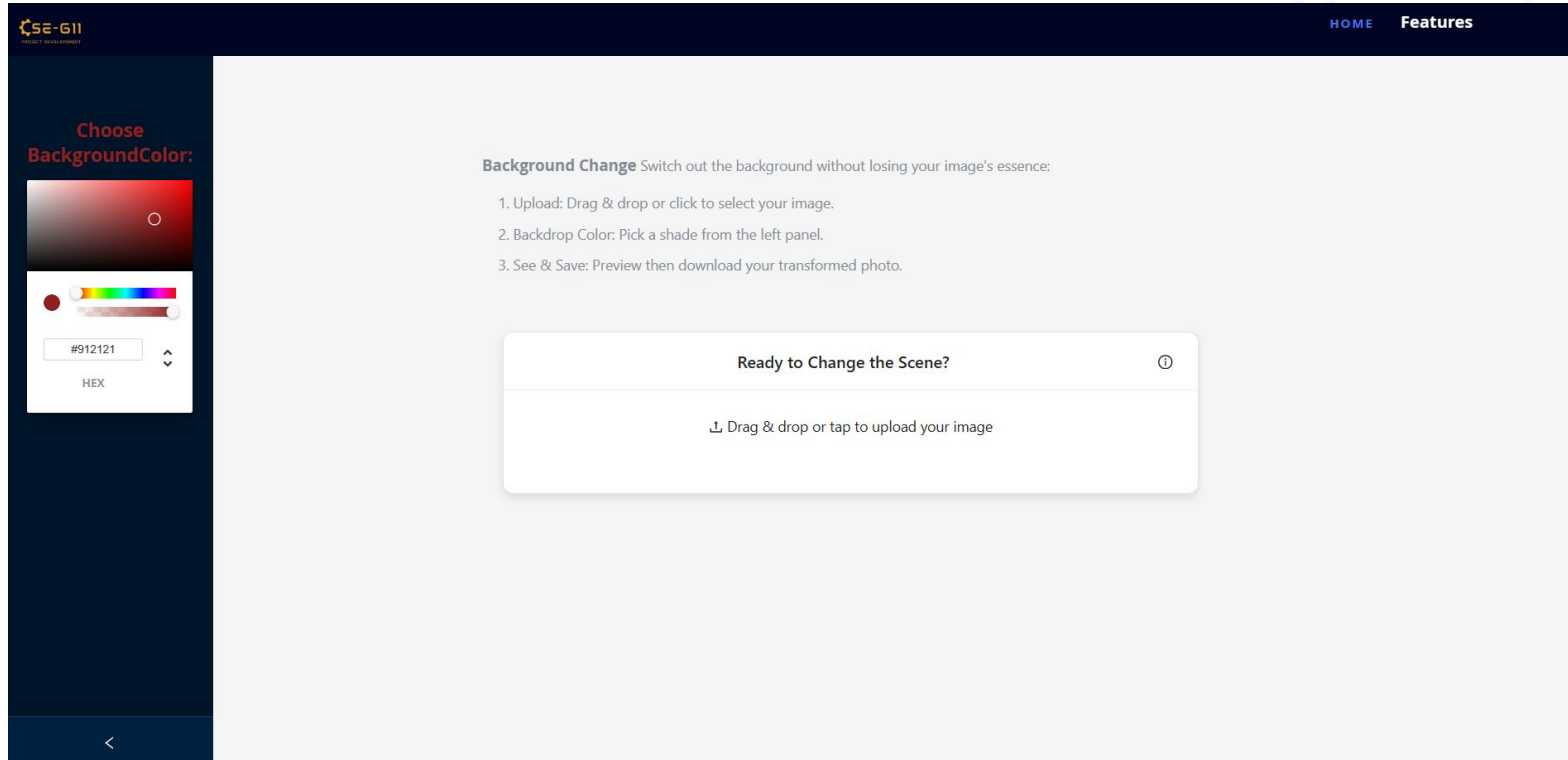
Background Change/Removal - Before Modernization and Fix



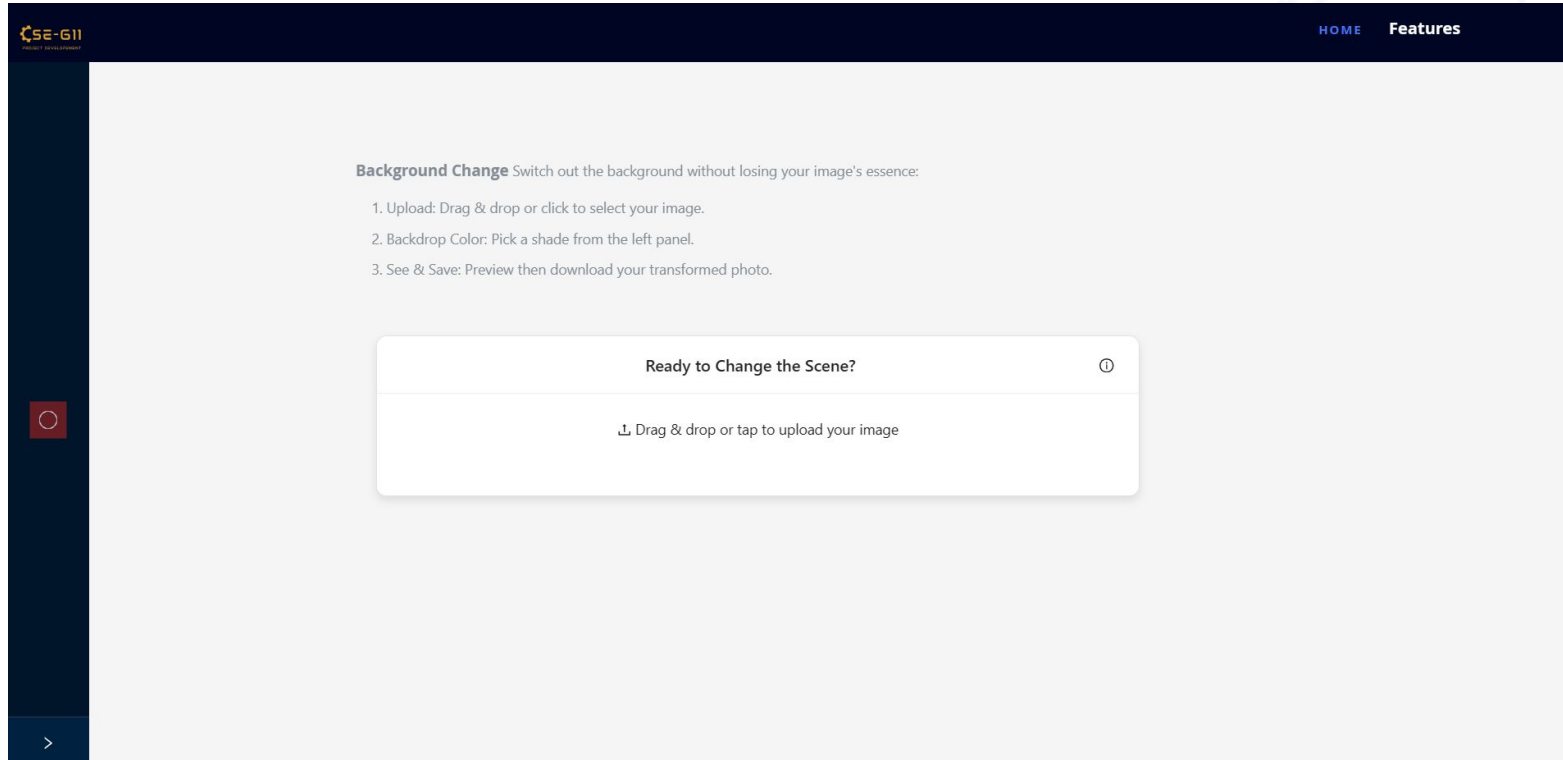
Background Change/Removal - Before Modernization and Fix



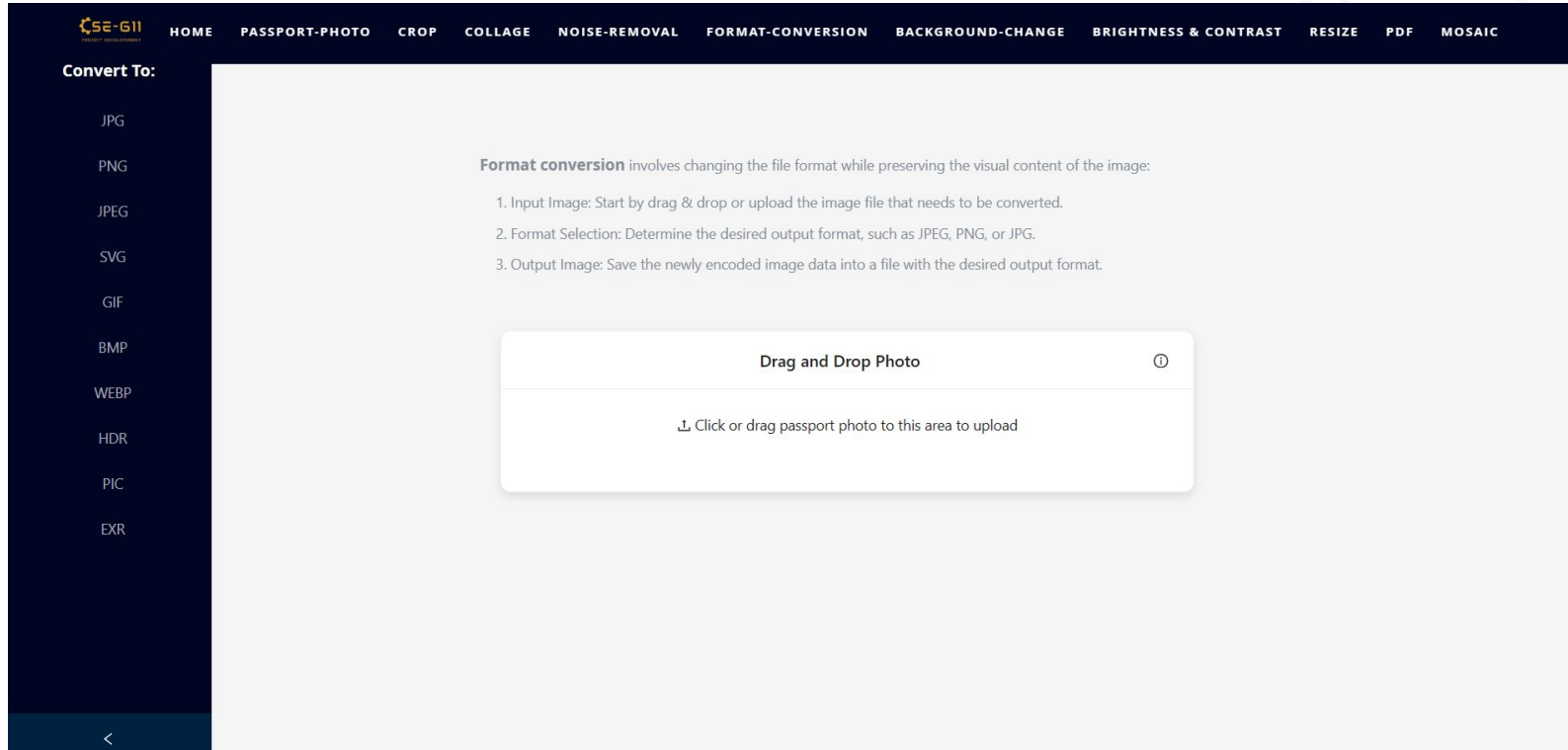
Background Change/Removal - After Modernization and Fix



Background Change/Removal - After Modernization and Fix



Format Conversion - Before Modernization and Fix



Format Conversion - Before Modernization and Fix

CS&G11

HOME

PASSPORT-PHOTO

CROP

COLLAGE

NOISE-REMOVAL

FORMAT-CONVERSION

BACKGROUND-CHANGE

BRIGHTNESS & CONTRAST

RESIZE

PDF

MOSAIC

Convert

To:

J

P

J

S

G

B

W

H

P

E

>

Format conversion involves changing the file format while preserving the visual content of the image:

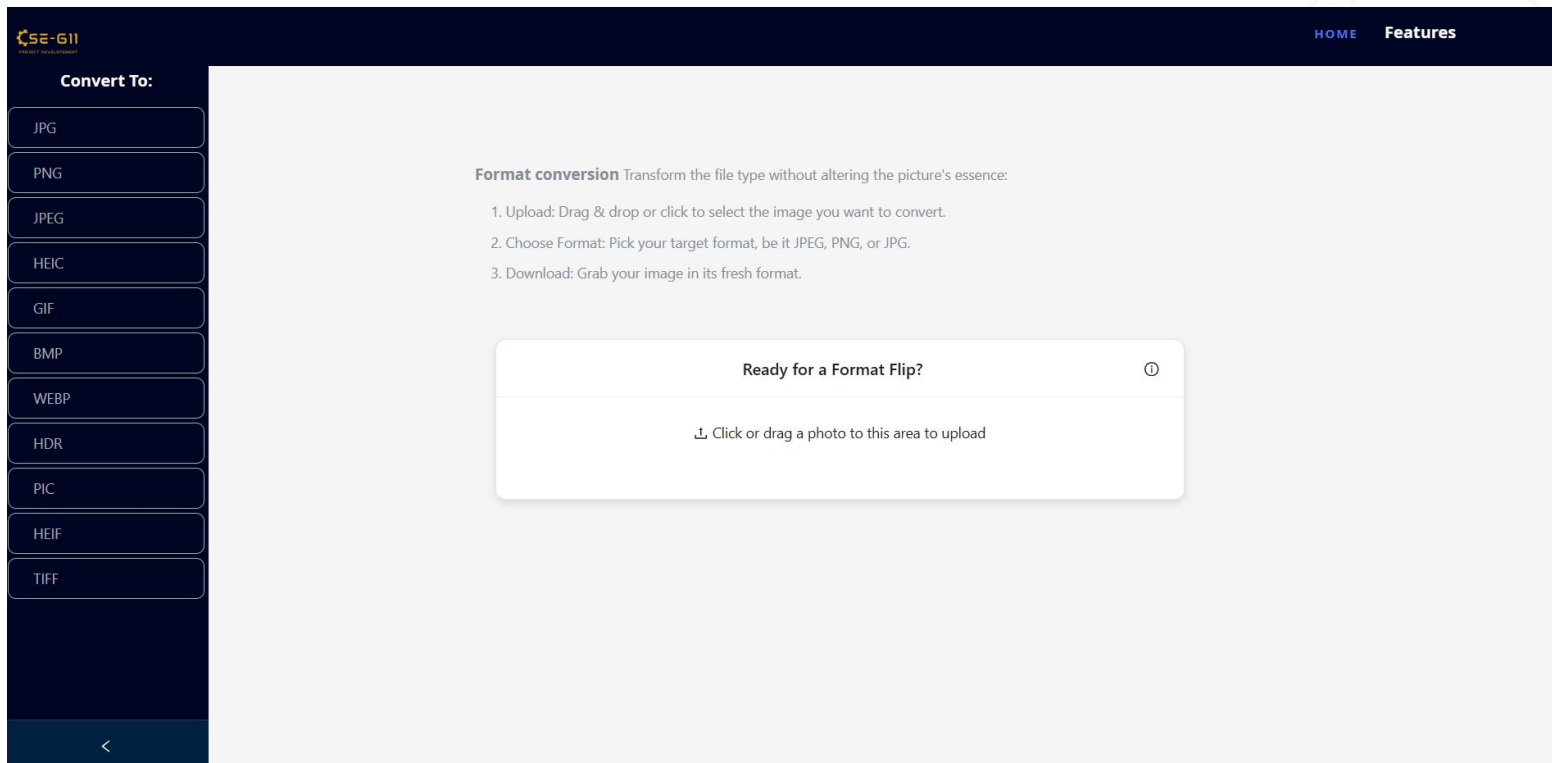
1. Input Image: Start by drag & drop or upload the image file that needs to be converted.
2. Format Selection: Determine the desired output format, such as JPEG, PNG, or JPG.
3. Output Image: Save the newly encoded image data into a file with the desired output format.

Drag and Drop Photo

ⓘ

⬇️ Click or drag passport photo to this area to upload

Format Conversion - After Modernization and Fix



Format Conversion - After Modernization and Fix

The screenshot shows the CSE-G11 Format Conversion tool interface. The top navigation bar is dark blue with the CSE-G11 logo on the left and 'HOME' and 'Features' links on the right. A vertical sidebar on the left, also dark blue, is labeled 'Convert To:' and contains a list of format buttons: J, P, J, H, G, B, W, H, P, H, T, and a bottom button with a right arrow. The main content area is light gray. It features a heading 'Format conversion' followed by the text 'Transform the file type without altering the picture's essence:'. Below this are three numbered steps: 1. Upload: Drag & drop or click to select the image you want to convert. 2. Choose Format: Pick your target format, be it JPEG, PNG, or JPG. 3. Download: Grab your image in its fresh format. In the center of the main area is a white rectangular box with a light gray border. The box has a title 'Ready for a Format Flip?' and a close icon (a circle with an 'X') in the top right corner. Below the title, it contains the text 'Click or drag a photo to this area to upload' with a small upward-pointing arrow icon.

CSE-G11 PRODUCT DEVELOPMENT

HOME Features

Convert To:

- J
- P
- J
- H
- G
- B
- W
- H
- P
- H
- T
- >

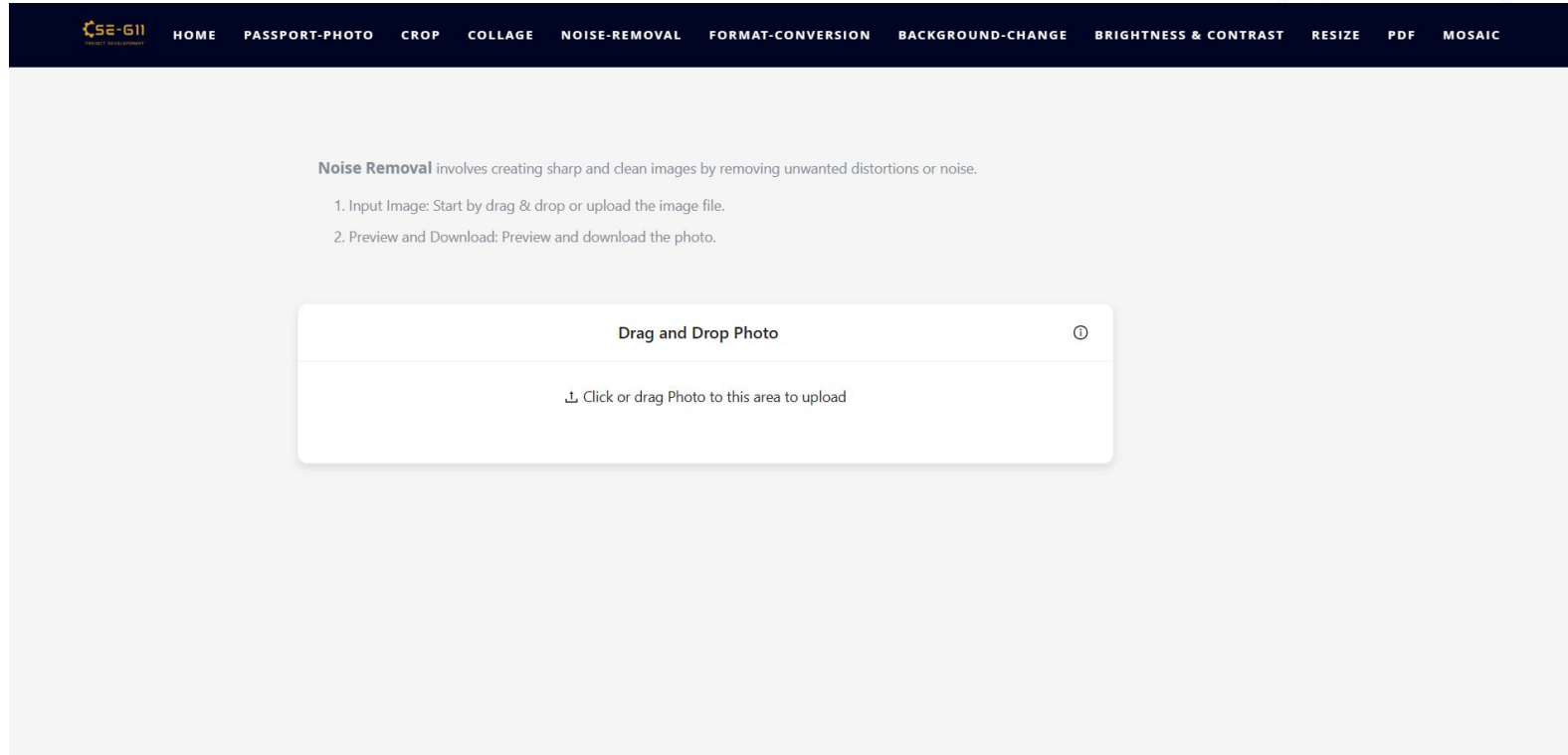
Format conversion Transform the file type without altering the picture's essence:

1. Upload: Drag & drop or click to select the image you want to convert.
2. Choose Format: Pick your target format, be it JPEG, PNG, or JPG.
3. Download: Grab your image in its fresh format.

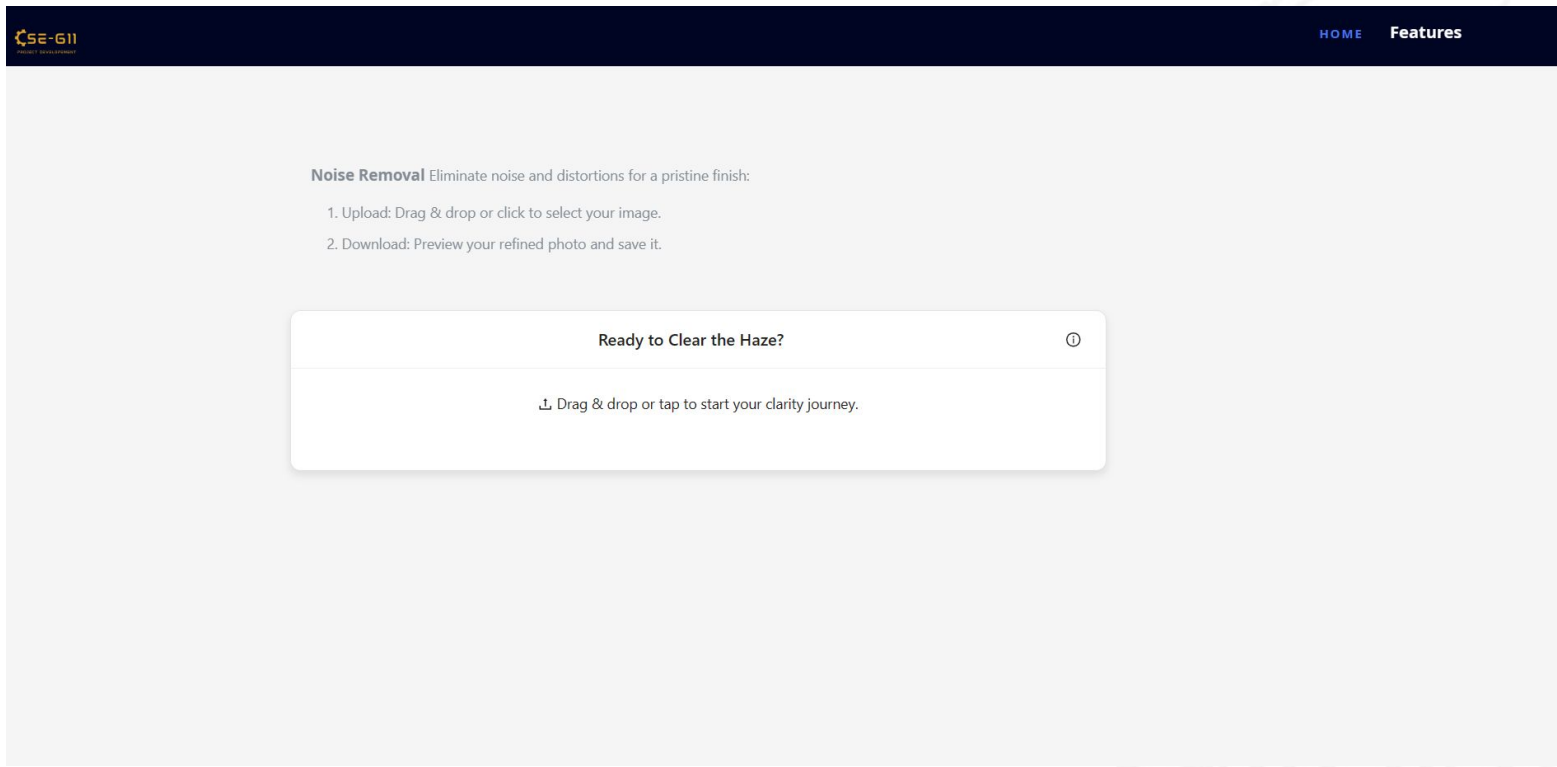
Ready for a Format Flip?

Click or drag a photo to this area to upload


Noise Removal - Before Modernization and Fix



Noise Removal - Before Modernization and Fix



Crop - Before Modernization and Fix



HOME

PASSPORT-PHOTO

CROP

COLLAGE

NOISE-REMOVAL

FORMAT-CONVERSION

BACKGROUND-CHANGE

BRIGHTNESS & CONTRAST

RESIZE

PDF

MOSAIC

Choose Ratio:

16/9

1/1

4/3

3/4

Width

Height

Set Custom Ratio

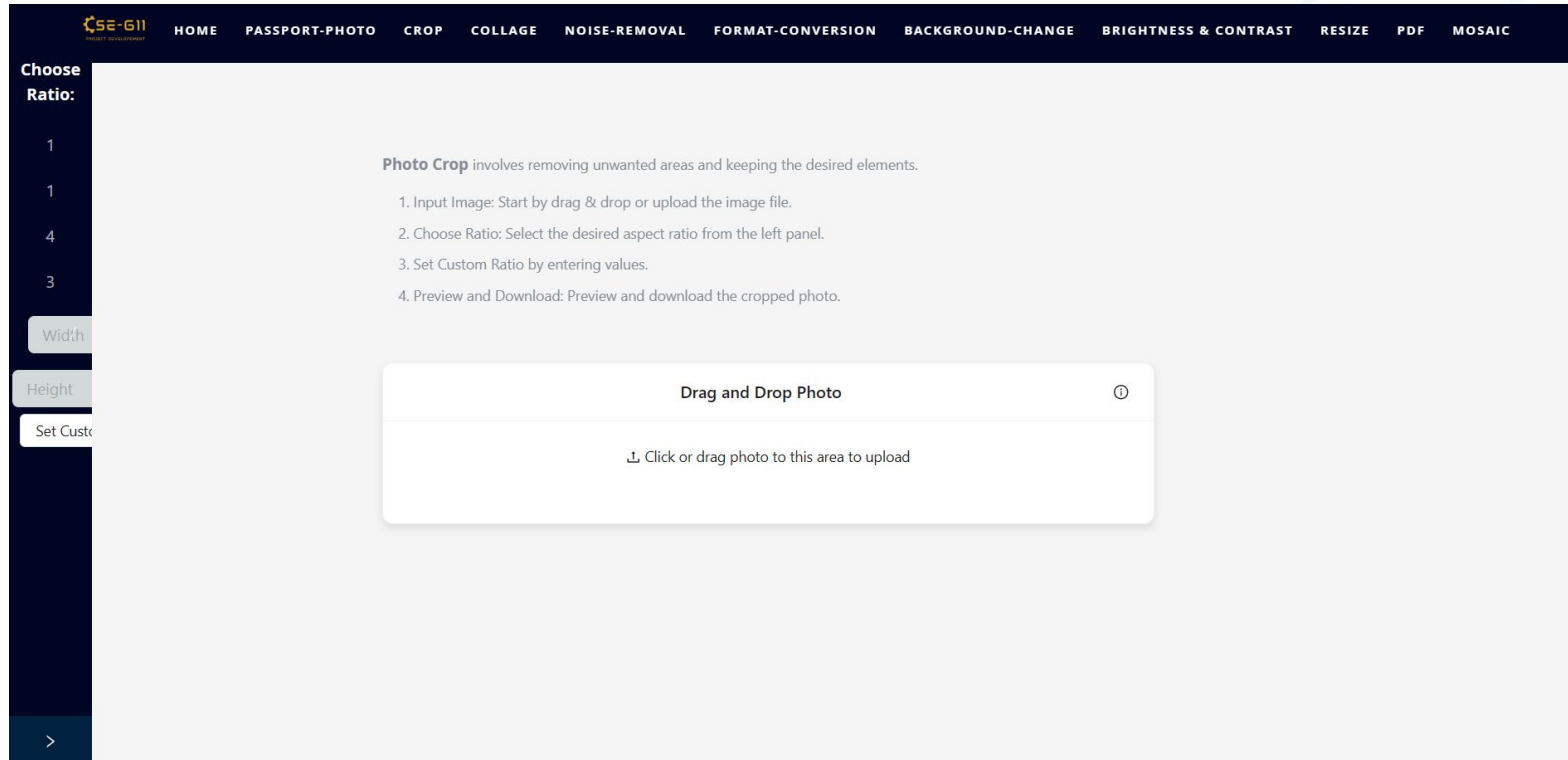
Photo Crop involves removing unwanted areas and keeping the desired elements.

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Ratio: Select the desired aspect ratio from the left panel.
3. Set Custom Ratio by entering values.
4. Preview and Download: Preview and download the cropped photo.

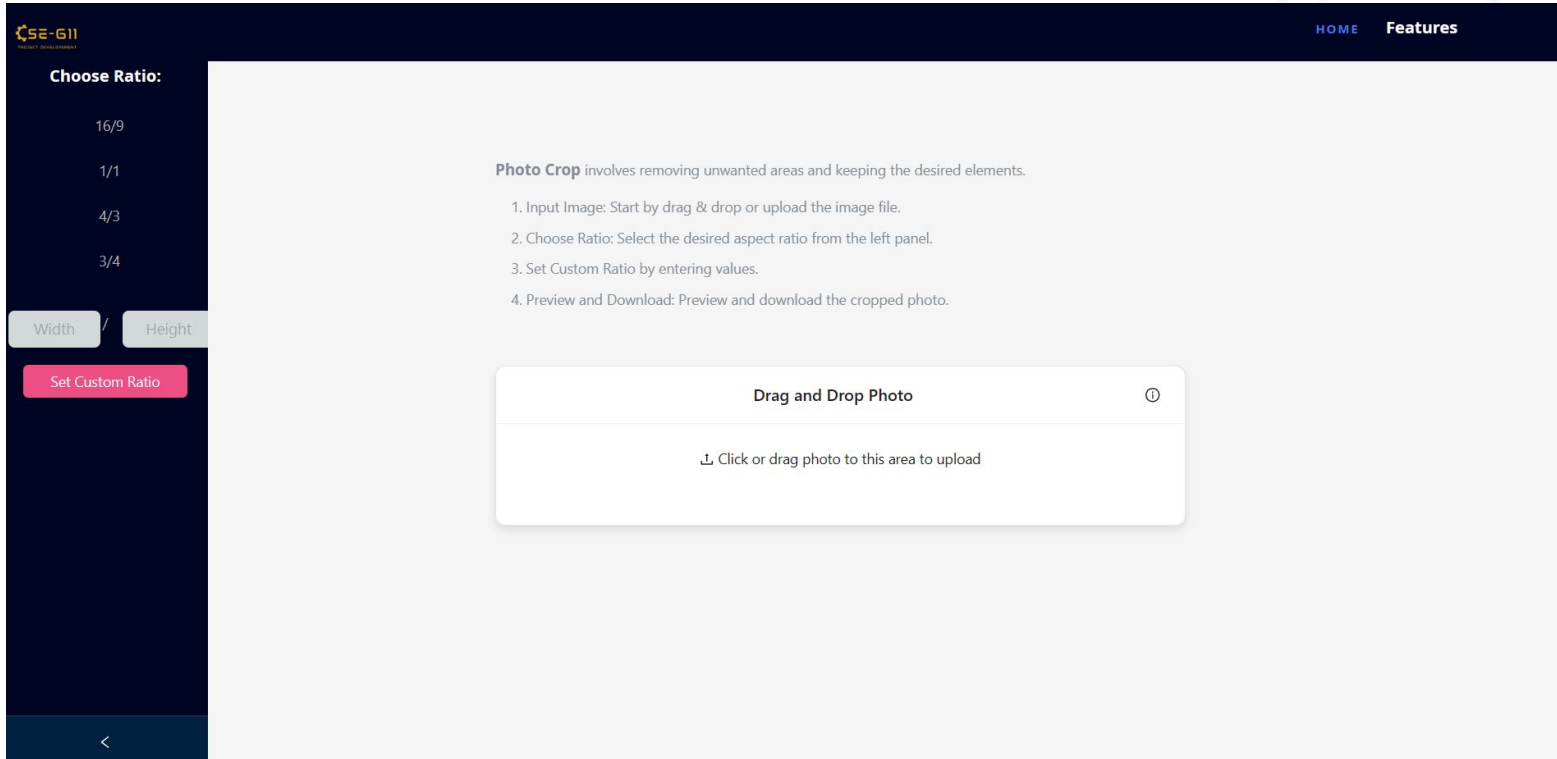
Drag and Drop Photo

Click or drag photo to this area to upload

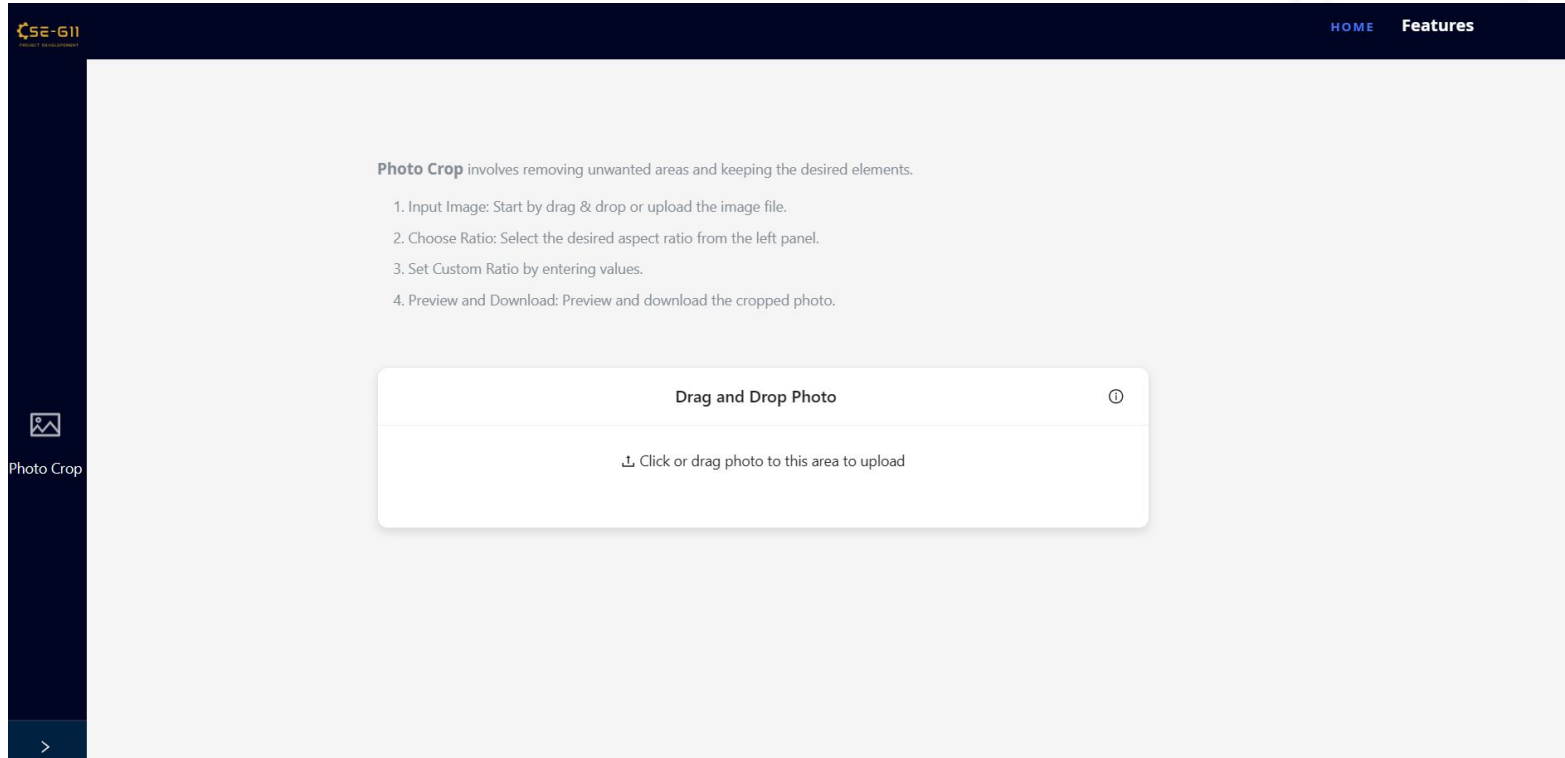
Crop - Before Modernization and Fix




Crop - After Modernization and Fix



Crop - After Modernization and Fix



Passport Photo - Before Modernization and Fix

SE-GII
RESEARCH & DEVELOPMENT

HOME

PASSPORT-PHOTO

CROP

COLLAGE

NOISE-REMOVAL

FORMAT-CONVERSION

BACKGROUND-CHANGE

BRIGHTNESS & CONTRAST

RESIZE

PDF

MOSAIC

Choose Country:

▼

☐ Apply high end features.

Passport Photo Creation involves creating a passport photo that meets the specific requirements of that country:

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Country: Select the desired country. Each country has its own set of specifications and requirements for passport photos.
3. Apply High End Features: For faster processing you can uncheck the box / Check the box for applying the features.
4. Preview and Download: Preview and download the generated passport photo.

Passport Photo

ⓘ

Click or drag photo to this area to upload.

Passport Photo - Before Modernization and Fix

SE-GII

HOME

PASSPORT-PHOTO

CROP

COLLAGE

NOISE-REMOVAL

FORMAT-CONVERSION

BACKGROUND-CHANGE

BRIGHTNESS & CONTRAST

RESIZE

PDF

MOSAIC

Choose Country:

▼

☐ Apply high end features.

Passport Photo

ⓘ

Click or drag photo to this area to upload.

Passport Photo Creation involves creating a passport photo that meets the specific requirements of that country:

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Country: Select the desired country. Each country has its own set of specifications and requirements for passport photos.
3. Apply High End Features: For faster processing you can uncheck the box / Check the box for applying the features.
4. Preview and Download: Preview and download the generated passport photo.

Passport Photo - After Modernization and Fix

SE-GII

Choose Country:

☐ Apply high end features.

HOMEFeatures

Passport Photo Creation involves creating a passport photo that meets the specific requirements of that country:

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Country: Select the desired country. Each country has its own set of specifications and requirements for passport photos.
3. Apply High End Features: For faster processing you can uncheck the box / Check the box for applying the features.
4. Preview and Download: Preview and download the generated passport photo.

Passport Photo

ⓘ

Click or drag photo to this area to upload.

Passport Photo - After Modernization and Fix

CSE-G11
PRODUCT DEVELOPMENT

→
Choose
Country

>

HOMEFeatures

Passport Photo Creation involves creating a passport photo that meets the specific requirements of that country:

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Country: Select the desired country. Each country has its own set of specifications and requirements for passport photos.
3. Apply High End Features: For faster processing you can uncheck the box / Check the box for applying the features.
4. Preview and Download: Preview and download the generated passport photo.

Passport Photo

ⓘ

⬇️Click or drag photo to this area to upload.

Passport Photo - Supports More Countries

SE-GII

HOME Features

Choose Country:

Saudi Arabia

UAE

New Zealand

Malaysia

Argentina

South Africa

Thailand

Indonesia

New Zealand

Passport Photo Creation involves creating a passport photo that meets the specific requirements of that country:

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Country: Select the desired country. Each country has its own set of specifications and requirements for passport photos.
3. Apply High End Features: For faster processing you can uncheck the box / Check the box for applying the features.
4. Preview and Download: Preview and download the generated passport photo.

Passport Photo

Click or drag photo to this area to upload.

Passport Photo - Added Country Specific Requirements

Choose Country:

UAE ▼

Check requirements here:

[Visit Website](#)

☒ **Apply high end features.**

Passport Photo Creation involves creating a passport photo that meets the specific requirements of that country:

1. Input Image: Start by drag & drop or upload the image file.
2. Choose Country: Select the desired country. Each country has its own set of specifications and requirements for passport photos.
3. Apply High End Features: For faster processing you can uncheck the box / Check the box for applying the features.
4. Preview and Download: Preview and download the generated passport photo.

Passport Photo



Click or drag photo to this area to upload.

Video Compression End point

The screenshot displays the Postman interface for a REST client. The left sidebar shows the 'My Workspace' with a collection named 'Project' containing a folder 'Photo_editor_IBM'. Inside this folder, the 'POST video Compression' endpoint is selected. The main panel shows the details of this endpoint, including the URL 'http://127.0.0.1:8000/video_compression/' and the 'Body' tab. The body is a JSON object with the following structure:

```
{  "output_url": "http://127.0.0.1:8000/static/test.mp4",  "videoUrl": "data:video/mp4;base64,AAAAIGZ0eXBtcDQyAAAAAG1wNDJtcDQxXNvbwF2YzEAAABKbw9vdGAAAGxtdmhkAAAAANvDj0XBw49FAAAAHgAAASKAAQAAAAQAAAAA",  "input_file_size": 25.593358993530273,  "output_file_size": 25.593358993530273,  "error": false,  "message": "Successfully Processed ",  "status": 200}
```

The response status is 200 OK, with a time of 910 ms and a size of 34.13 MB. The bottom status bar shows 'Online', 'Find and replace', 'Console', and 'Import Complete'.

≡

←

→

Home

Workspaces ▾

API Network ▾

Explore

Search Postman

Invite

Upgrade ▾

—

×

My Workspace

New

Import

Overview

POST video Compression

POST background_change

+

...

No Environment ▾

Collections

+

≡

...

Project

▾

Photo_editor_IBM

▾

POST Mosaic Maker

POST Format_change

POST passport_photo_size

POST background_change

POST video Compression

POST Resize

POST Noise Removal

POST Pdf maker

POST Collage

POST crop

POST stats

Project / Photo_editor_IBM / video Compression

Save ▾

POST ▾

http://127.0.0.1:8000/video_compression/

Send ▾

Params

Authorization

Headers (9)

Body ●

Pre-request Script

Tests ●

Settings

Cookies

```
1 pm.test("Status code is 200", function () {
2   pm.response.to.have.status(200);
3 });
4
5 pm.test("Message is successfully processed", function () {
6   pm.expect(pm.response.json().message).to.eql("Successfully Processed ");
7 });
8
9 pm.test("Validate if error response is false", function () {
10  pm.expect(pm.response.json().error).to.eql(false);
11 });
12
13 pm.test("Validate if input file size is equal to output file size", function () {
14  pm.expect(pm.response.json().input_file_size).to.eql(pm.response.json().output_file_size);
15 }
```

Write scripts with Postbot

Test scripts are written in JavaScript, and are run after the response is received. Learn more about [tests scripts](#)

Snippets

Get an environment variable

Get a global variable

Get a variable

Get a collection variable

Body

Cookies

Headers (10)

Test Results (4/4)

Status: 200 OK

Time: 910 ms

Size: 34.13 MB

Save as Example

...

Pretty

Raw

Preview

Visualize

JSON ▾

```
1 {
2   "output_url": "http://127.0.0.1:8000/static/test.mp4",
3   "videoUrl": "data:video/mp4;base64,AAAAIGZ0eXBtcDQyAAAAAG1wNDJtcDQxXNvbWFWY2YzEAAABKCBw9vdgAAAGxtdmhkAAAAANvDj0Xbw49FAAAAHgAAASKAQAAAAQAAAAA
4   "input_file_size": 25.593358993530273,
5   "output_file_size": 25.593358993530273,
6   "error": false,
7   "message": "Successfully Processed ",
8   "status": 200
9 }
```

Online

Find and replace

Console

1 Import Complete

Postbot

Runner

Capture requests

Cookies

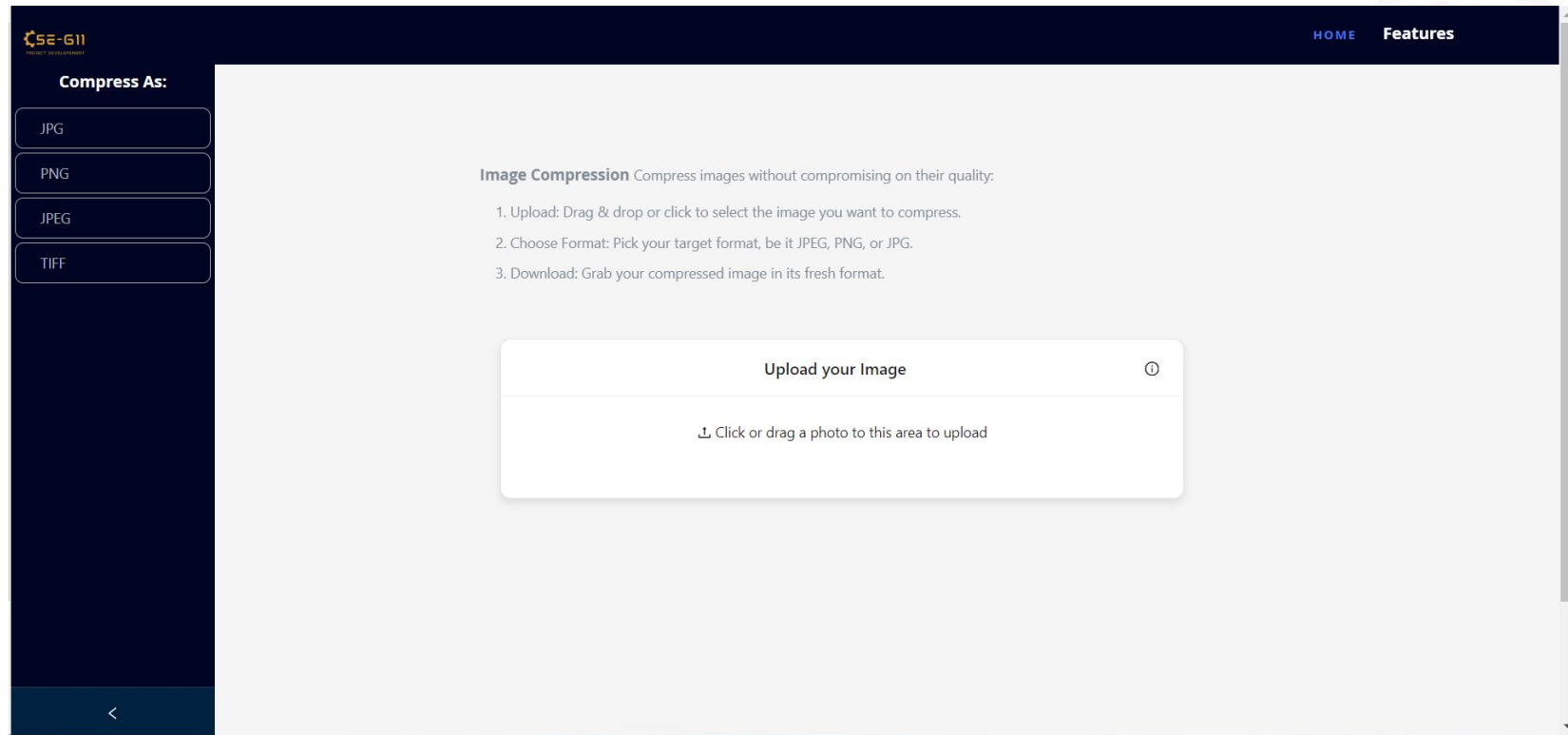
Trash

Image Compression - Before Frontend Build

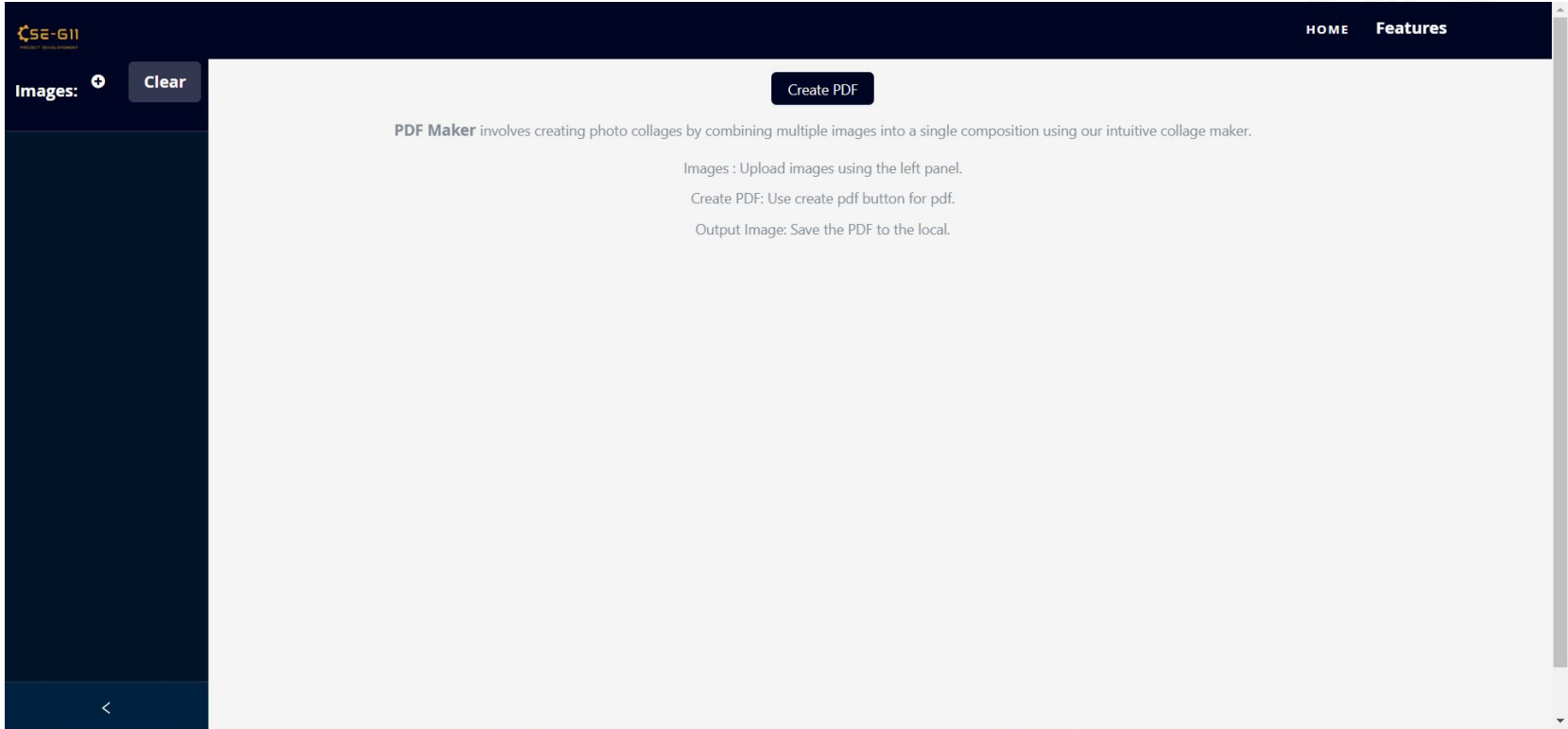
 SE-GII
PROJECT DEVELOPMENT

[HOME](#) **Features**

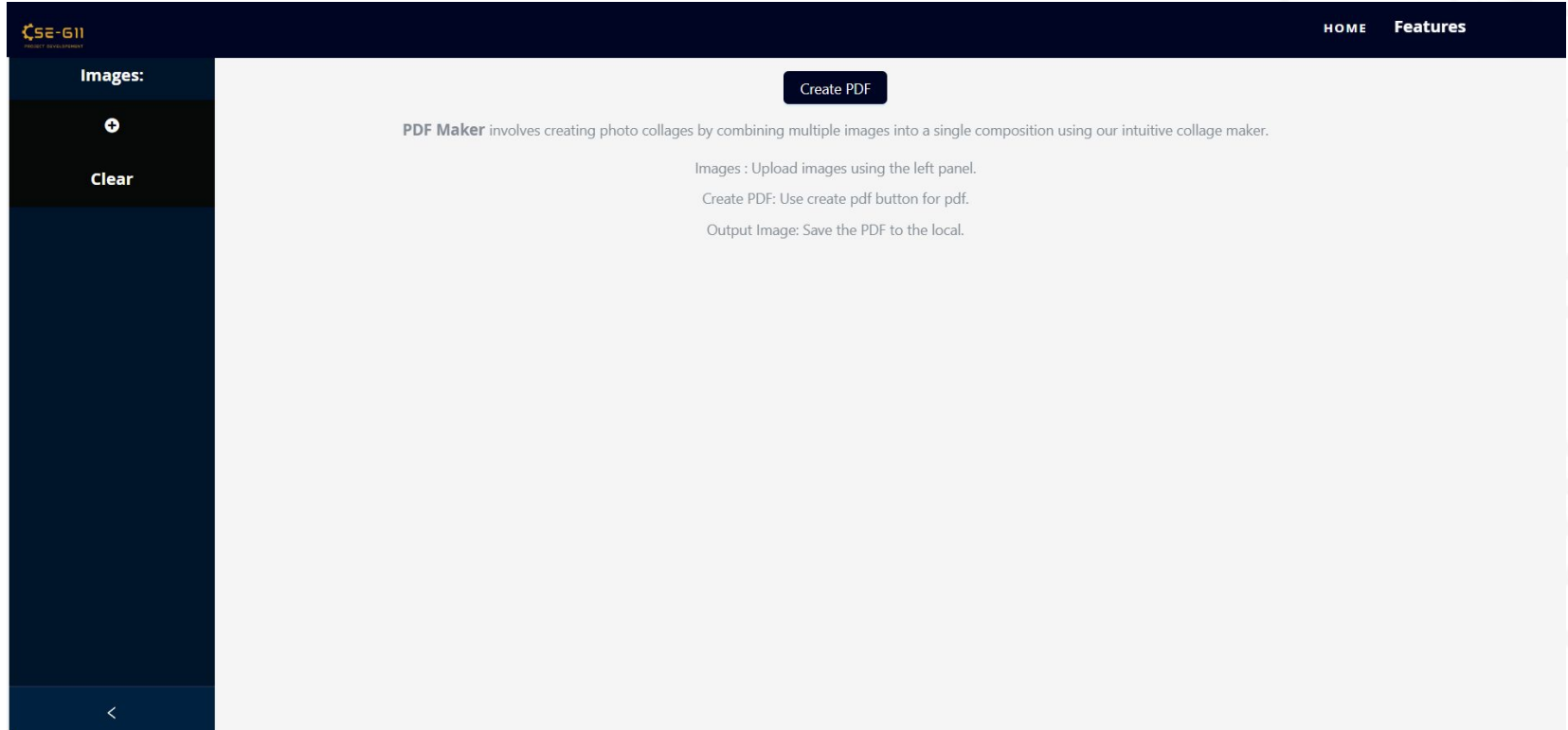
Image Compression - After Frontend Build



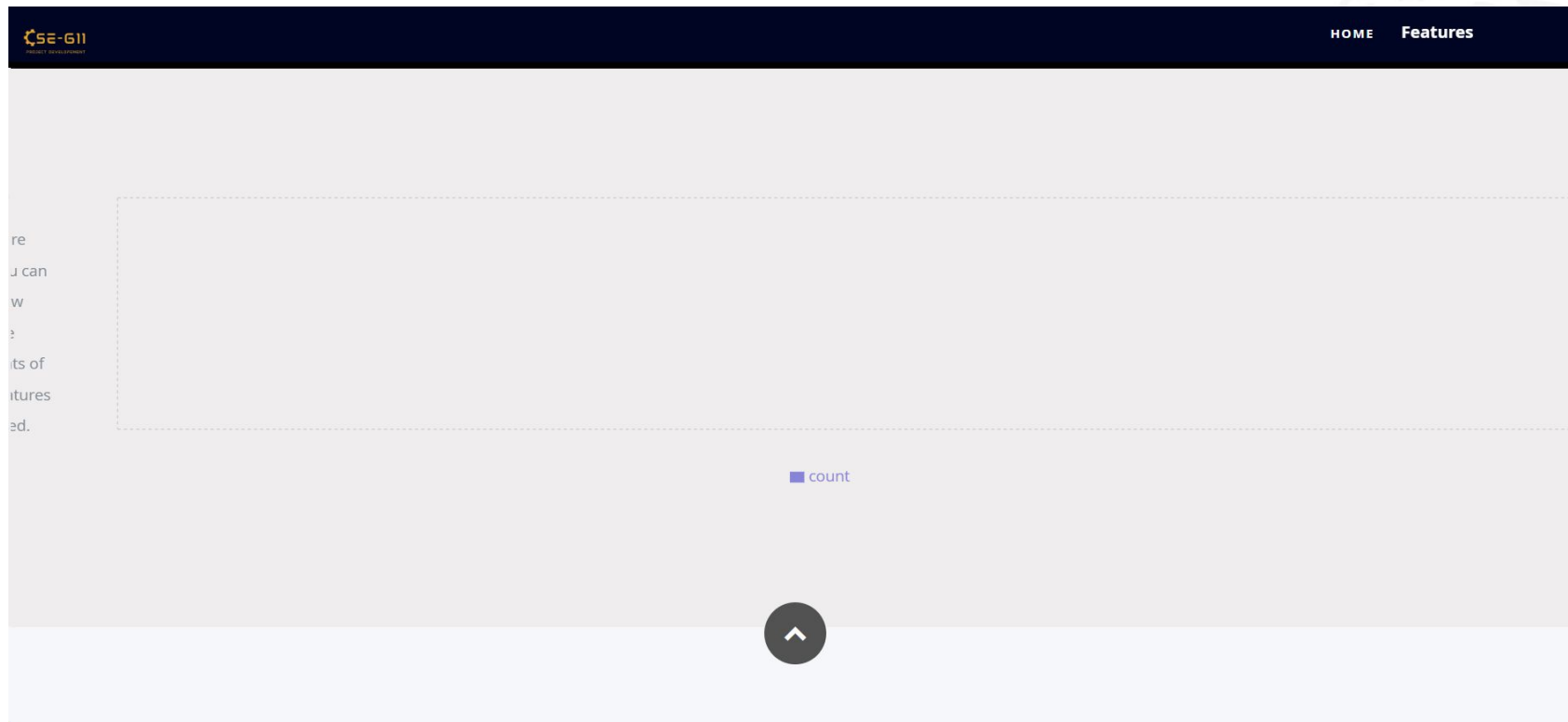
PDF page - Before fix



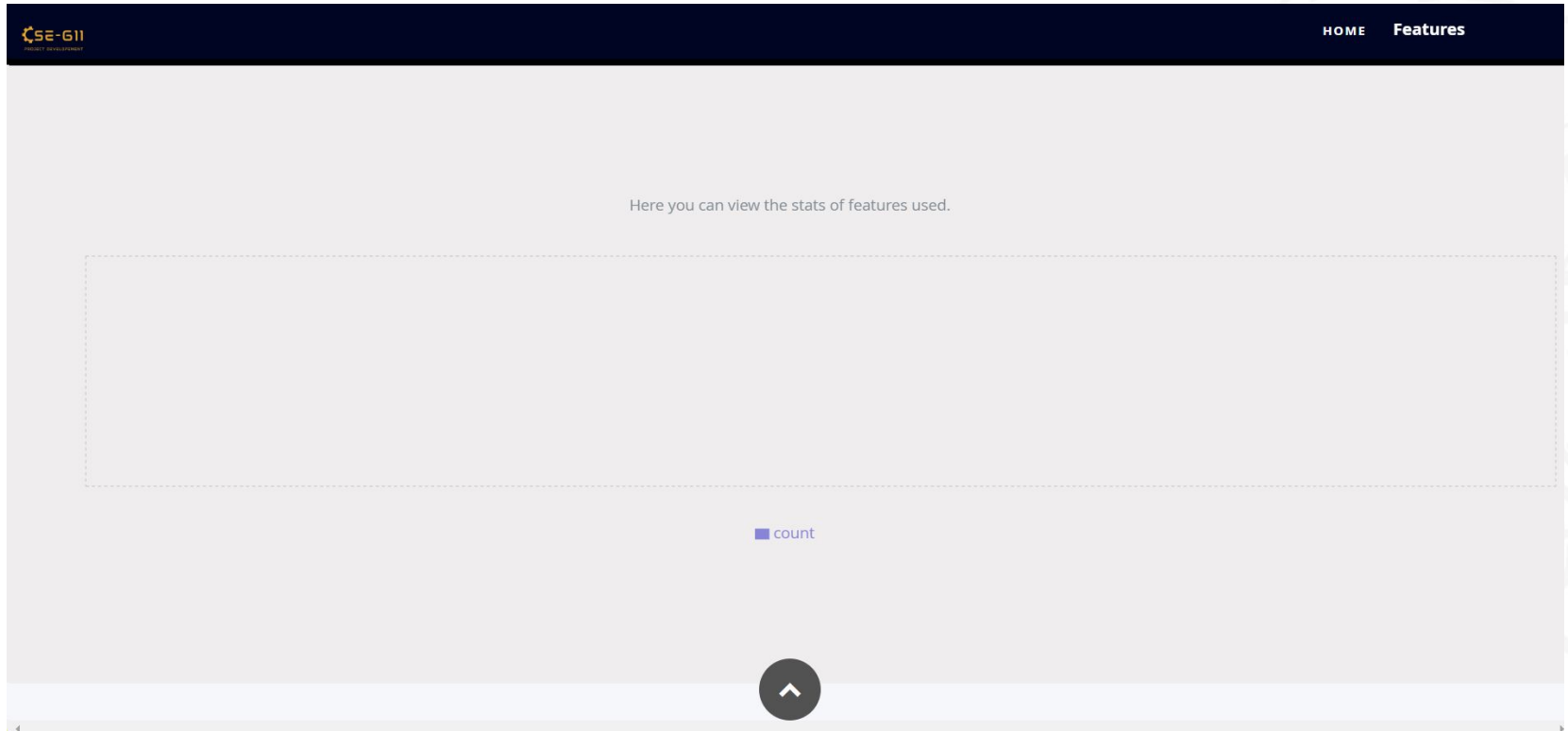
PDF page - After fix



Home page - Before fix

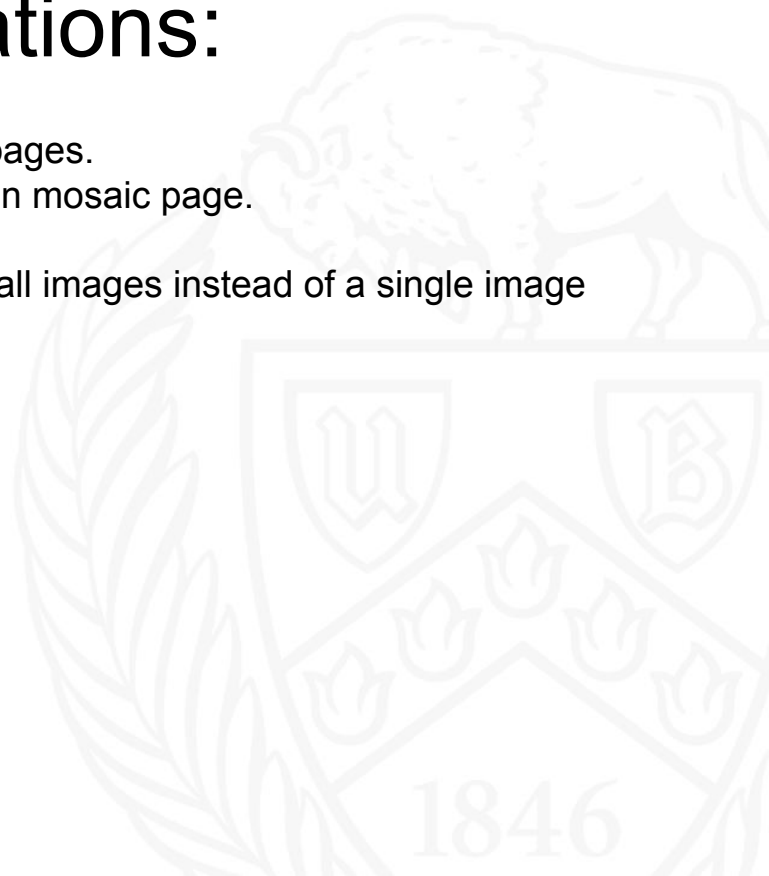


Home page - After fix



Other fixes and implementations:

- Delete button confirmation pop-up implemented on all pages.
- Also implemented above pop-up for template deletion on mosaic page.
- Bug fixes on Collage page.
- The individual clear button of each image was clearing all images instead of a single image when more than two images were being added.
- A few more frontend layout enhancements.



K8s Deployment

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: phototeditor-frontend-depl
spec:
  selector:
    matchLabels:
      app: photoeditor-frontend-app
  replicas: 1
  template:
    metadata:
      labels:
        app: photoeditor-frontend-app
    spec:
      containers:
        - name: frontend
          image: saad12ah/photoeditor-frontend
```

```
apiVersion: v1
kind: Service
metadata:
  name: phototeditor-frontend-servc
spec:
  type: NodePort
  selector:
    app: photoeditor-frontend-app
  ports:
    - name: my-app
      port: 3000
      targetPort: 3000
```

Thank you

