# PIXEL PERFECTION: TRANSFORMING YOUR PHOTOS WITH OUR CUTTING-EDGE IMAGE EDITING PLATFORM

## IBM NAAN MUDHALVAN

**PROJECT REPORT**

***Submitted By***


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***in partial fulfilment for the award of the degree***

***of***

**BACHELOR OF ENGINEERING**

***in***

**COMPUTER SCIENCE AND ENGINEERING**


**KNOWLEDGE INSTITUTE OF TECHNOLOGY,**
**SALEM-637504**


**ANNA UNIVERSITY::CHENNAI 600 025**
**MAY 2023**

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## BONAFIDE CERTIFICATE

Certified that this project report titled **"PIXEL PERFECTION: TRANSFORMING YOUR PHOTOS WITH OUR CUTTING-EDGE IMAGE EDITING PLATFORM"** is the bonafide work of **"BARANI DHARAN V M (611220104018), BARATH B (611220104019), BHARATH VISHNU C J (611220104023), DILIP S (611220104041)"** who carried out the project work under my supervision.


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# ACKNOWLEDGEMENT

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At this pleasing moment of having successfully completed our project, we wish to convey our sincere thanks and gratitude to our beloved president **Mr. C. Balakrishnan**, who has provided all the facilities to us.

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# ABSTRACT

# ABSTRACT

Pixel Perfection is a revolutionary image editing platform designed to empower users to transform their photos with unparalleled precision and creativity. Leveraging advanced technologies and a user-friendly interface, our platform offers a comprehensive set of tools and features that enable both amateur photographers and seasoned professionals to achieve stunning results. At the core of Pixel Perfection is our state-of-the-art image processing engine, which harnesses the power of artificial intelligence and machine learning algorithms. This allows users to effortlessly enhance, retouch, and manipulate their images with remarkable accuracy and efficiency. Our platform's intelligent algorithms analyze the composition, colors, and details of each photo, providing intelligent suggestions and automated adjustments that streamline the editing process. Pixel Perfection offers an extensive range of editing tools, including advanced retouching, precise color grading, seamless object removal, and artistic filters. Whether you're aiming to perfect portraits, landscape shots, or product images, our platform provides the necessary tools to achieve your vision.

# LIST OF FIGURES

# LIST OF ABBREVIATIONS

| ABBREVIATION | EXPANSION |
|---|---|
| AI | ARTIFICIAL INTELLIGENCE |
| CNN | CONVOLUTIONAL NEURAL NETWORK |
| ML | MACHINE LEARNING |
| DFD | DATA FLOW DIAGRAM |
| PS | PROBLEM STATEMENT |
| USN | USER STORY NUMBER |

# INTRODUCTION

# CHAPTER - 1

# INTRODUCTION

## 1.1 PROJECT OVERVIEW

Pixel Perfection is an innovative image editing platform that allows users to transform their photos with ease and precision. Our cutting-edge software provides a wide range of tools and features that enable users to edit their images to achieve pixel-perfect results. Whether you're a professional photographer, graphic designer, or just someone who loves to take photos, Pixel Perfection is the perfect tool for enhancing your images. With its intuitive user interface and powerful editing tools, you can easily adjust or remove your image backgrounds, car image backgrounds, cartoon your face & Face beauty, and more to create stunning images that are sure to impress. At Pixel Perfection, we understand the importance of high-quality images in today's digital age, and we're committed to providing our users with the tools they need to achieve pixel-perfect results.

## 1.2 PURPOSE

The purpose of Pixel Perfection is to empower users to transform their photos into visually stunning and captivating masterpieces using our cutting-edge image editing platform. Our goal is to provide photographers, both amateur and professional, with a comprehensive suite of advanced tools and features that enhance the quality, artistry, and overall impact of their photographs. By harnessing the power of artificial intelligence and machine learning, we aim to make the editing process intuitive, efficient, and accessible to all, while preserving the authenticity and integrity of the original images. With Pixel Perfection, users can unleash their creativity, elevate their photos to unparalleled levels of perfection, and leave a lasting impression on viewers.

# LITERATURE SURVEY

# CHAPTER - 2

# LITERATURE SURVEY

## 1. "DIGITAL IMAGE PROCESSING" BY RAFAEL C. GONZALEZ AND RICHARD E. WOODS (2017)

This paper provides various image enhancement techniques. It provides a thorough introduction to the field of image processing and covers both traditional and modern approaches. The book discusses fundamental concepts such as filtering, histogram equalization, and spatial domain methods, explaining their underlying principles and providing practical examples. It also explores advanced topics like frequency domain processing, color image enhancement, image compression, image segmentation, and object recognition. With its mathematical formulations, algorithmic explanations, and real-world applications, the book serves as an essential resource for anyone seeking a deep understanding of image enhancement techniques in digital image processing.

## 2. "USER EXPERIENCE DESIGN: CREATING DESIGNS USERS REALLY LOVE" BY GAVIN ALLANWOOD AND PETER BEARE (2019)

In this paper there is a valuable resource that focuses on user-centred design principles and techniques. The paper emphasizes the importance of understanding user needs and preferences in creating designs that users will genuinely love. It covers a wide range of topics relevant to user experience design, including user research methodologies, information architecture, and interaction design. The authors provide practical guidance on conducting user research to gather insights, organizing information effectively to enhance usability, and designing intuitive and engaging user interfaces.

## 3. "DEEP LEARNING" BY IAN GOODFELLOW, YOSHUA BENGIO, AND AARON COURVILLE (2016)

This is a comprehensive paper that delves into various deep learning algorithms and their applications. The paper covers foundational concepts and techniques related to deep learning, including neural networks, backpropagation, and optimization algorithms. It specifically explores deep learning algorithms applicable to image processing, such as convolutional neural networks (CNNs) known for their effectiveness in image classification, object detection, and semantic segmentation tasks.

## 4. "ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR BUSINESS: A NO-NONSENSE GUIDE TO DATA DRIVEN TECHNOLOGIES" BY STEVEN FINLAY (2018)

This offers a practical and accessible understanding of artificial intelligence (AI) and machine learning (ML) technologies, particularly in the context of business applications. The paper explores the potential of AI and ML in image editing platforms by highlighting their ability to automate tasks, improve image quality, and provide intelligent editing suggestions. It provides insights into how AI and ML algorithms can analyse and interpret images, enabling automated processes like image enhancement, and content-aware editing.

## 5. "ADVANCES IN IMAGE AND VIDEO TECHNOLOGY" EDITED BY CHONG-WAH NGO, ALEXANDER HAUPTMANN (2019)

This collection of research papers highlights recent advancements in image and video technologies. It covers topics such as image super-resolution, image inpainting, and image style transfer, which are at the forefront of cutting-edge image editing.

# IDEATION & PROPOSED SOLUTION

# CHAPTER - 3

# IDEATION & PROPOSED SOLUTION

## 3.1 PROBLEM STATEMENT DEFINITION

### Customer Problem Statement Template:


**Fig 3.1.1 PROBLEM STATEMENT**

The Fig 3.1.1 describes about the Please provide more information or context for the problem statement. A one-sentence description is not sufficient to understand the problem you need help with.

| Problem Statement (PS) | I am (Customer) | I'm trying to | But | Because | Which makes me feel |
|---|---|---|---|---|---|
| PS-1 | Photographer | Enhance Photos | Limited Options | Inadequate Features | Frustrated |
| PS-2 | Small Business Owner | Attract | Unprofessional | Limited Resources | Frustrated |

## 3.2 EMPATHY MAP CANVAS

An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment. The empathy map was originally created by Dave Gray and has gained much popularity within the agile community have the team members speak about the sticky notes as they place them on the empathy map. Ask questions to reach deeper insights so that they can be elaborated for the rest of the team.

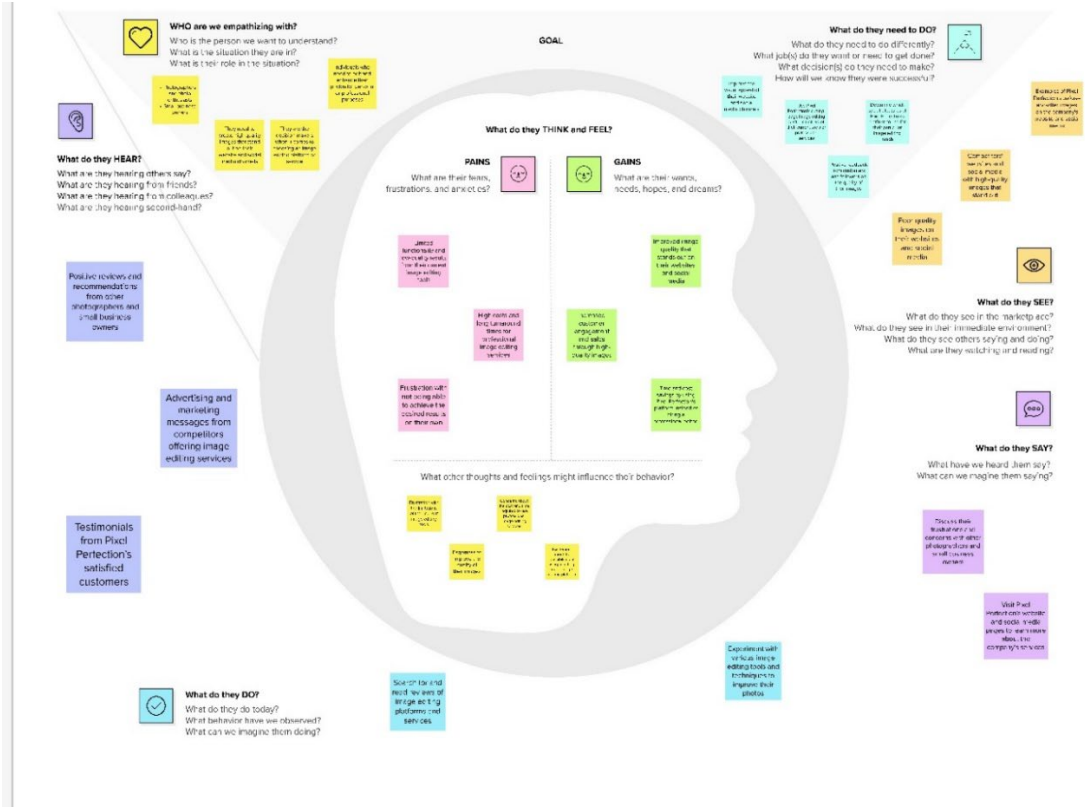



**Fig 3.2.1 EMPATHY MAP**

The Fig 3.2.1 describes about an empathy map is a visual tool used to understand and empathize with the needs, thoughts, emotions, and behaviors of a specific target audience or user.

## 3.3 IDEATION & BRAINSTORMING

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to

problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome.

## Step-1: Team Gathering, Collaboration and Select the Problem Statement


**Fig 3.3.1 TEAM GATHERING DIAGRAM**

The Fig 3.3.1 describes about an empathy map is a visual tool used to understand and empathize with the needs, thoughts, emotions, and behaviours of a specific target audience or user.

## Step-2: Brainstorm, Idea Listing and Grouping

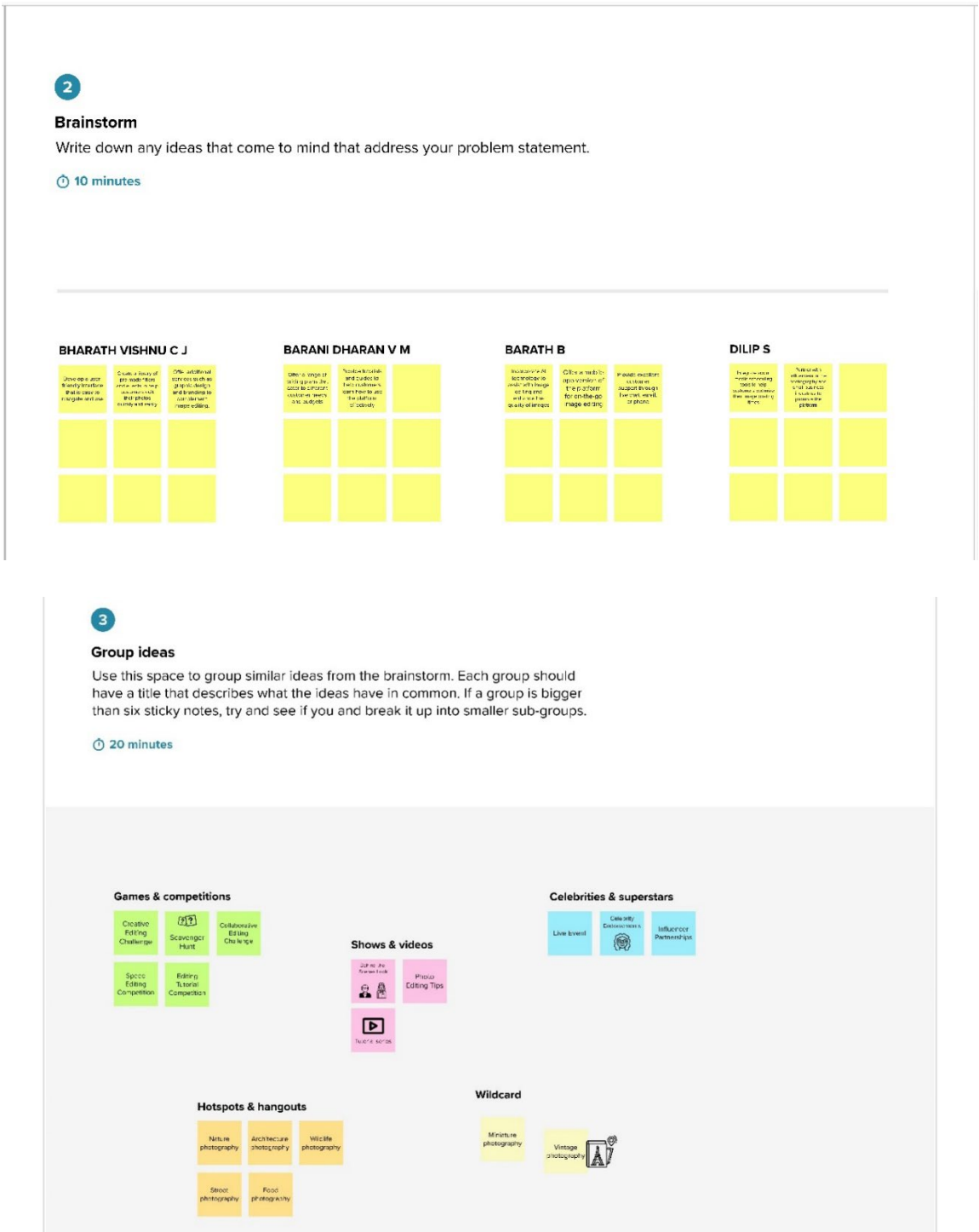



**Fig 3.3.2 BRAINSTROMING DIAGRAM**

The Fig 3.3.2 describes about A visual representation illustrating the generation and organization of ideas through interconnected nodes or branches.

## Step-3: Idea Prioritization


**Fig. 3.3.3 IDEA PRIORITIZATION DIAGRAM**

The Fig 3.3.3 describes about the Idea Prioritization Diagram is a visual tool used to evaluate and rank ideas based on their feasibility, impact, and strategic alignment.

## 3.4 PROPOSED SOLUTION

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problem to be solved) | Existing image editing platforms fail to provide a user-friendly and comprehensive solution that combines cutting-edge technology and powerful editing tools, hindering individuals and businesses from achieving professional-quality and visually appealing photos. |
| 2. | Idea / Solution description | Pixel Perfection offers a transformative image editing platform with advanced features, intuitive interfaces, and a comprehensive suite of tools, empowering users to effortlessly enhance their photos and unleash their visual potential. |
| 3. | Novelty / Uniqueness | Pixel Perfection stands out with its unique combination of cutting-edge technology, user-friendly interface, and a comprehensive set of advanced editing tools, providing users with a truly transformative and unparalleled photo editing experience. |
| 4. | Social Impact / Customer Satisfaction | Pixel Perfection revolutionizes photo editing with its compact yet powerful platform, empowering users to transform their photos into visually stunning masterpieces and effortlessly share them on social media. |

| | | |
|---|---|---|
| 5. | Business Model (Revenue Model) | Pixel Perfection adopts a subscription-based revenue model, offering different tiers of pricing plans with varying features and storage options, ensuring sustainable revenue generation while providing users with flexible access to the cutting-edge image editing platform. |
| 6. | Scalability of the Solution | Pixel Perfection's image editing platform is designed for seamless scalability, allowing it to efficiently handle increasing user demand and accommodate a growing number of photo editing tasks without compromising performance or user experience. |

# REQUIREMENT ANALYSIS

# CHAPTER – 4

# REQUIREMENT ANALYSIS

## 4.1 FUNTIONAL REQUIREMENTS

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|---|---|---|
| FR-1 | **Image Upload** | Users should be able to upload their images to the platform. |
| FR-2 | **Image Editing** | The platform should provide tools for users to edit their images, including cropping, resizing, adjusting brightness, contrast, saturation, etc. |
| FR-3 | **Image Enhancement** | The platform should offer tools to enhance the image quality, such as noise reduction, sharpening, and color correction. |
| FR-4 | **Filters** | The platform should provide a range of filters that users can apply to their images to achieve different effects. |
| FR-5 | **Layering** | The platform should support layering, allowing users to add text, graphics, or other images to their edited photos. |
| FR-6 | **Save/Download** | Users should be able to save their edited images to their accounts on the platform and/or download them to their local devices. |

## 4.2 NON - FUNTIONAL REQUIREMENTS

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | The platform should have an intuitive and user-friendly interface, making it easy for users to navigate and use the various editing tools. |
| NFR-2 | **Security** | The platform should be secure, protecting user data and images from unauthorized access or theft. |
| NFR-3 | **Reliability** | The platform should be reliable, with minimal downtime or errors. |
| NFR-4 | **Performance** | The platform should be fast and responsive, with minimal lag or delay when users upload, edit, or save their images. |
| NFR-5 | **Availability** | The platform should be available to users at all times, with minimal planned or unplanned downtime. |
| NFR-6 | **Scalability** | The platform should be designed to handle a large number of users and images without slowing down or crashing. |

# PROJECT DESIGN

# CHAPTER – 5

# PROJECT DESIGN

## 5.1 DATA FLOW DIAGRAMS

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

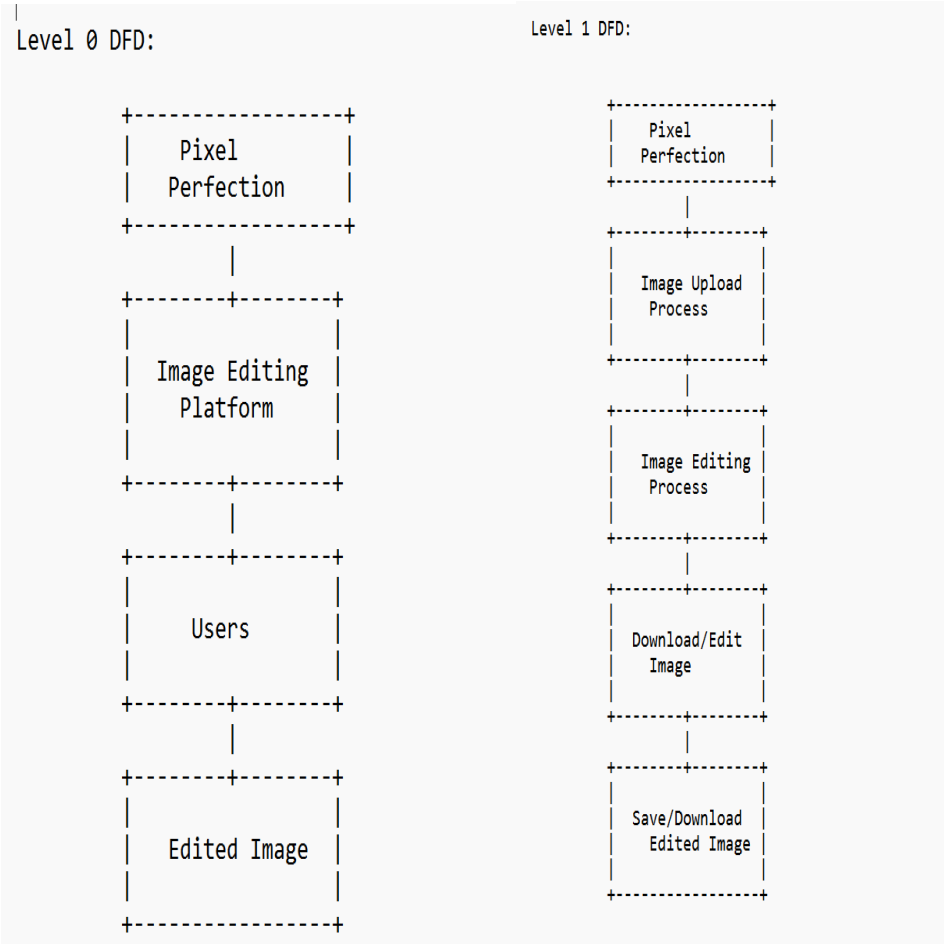



**Fig. 5.1 DATA FLOW DIAGRAMS**

The Fig 5.1 describes about the Data Flow Diagrams (DFDs) depict the flow of data within a system or process, illustrating inputs, outputs, and transformations in a graphical format.

## 5.2 SOLUTION & TECHNICAL ARCHITECTURE

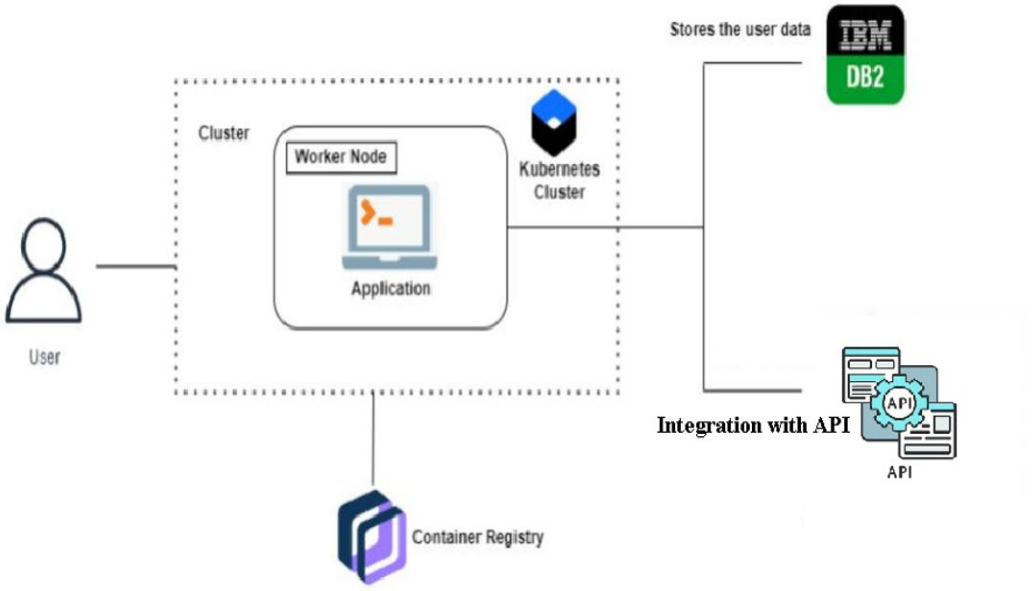



**Fig 5.2.1. SOLUTION ARCHITECTURE**

The Fig 5.2.1 describes about the process of designing and defining the structure and components of a software solution to meet specific business requirements and objectives.

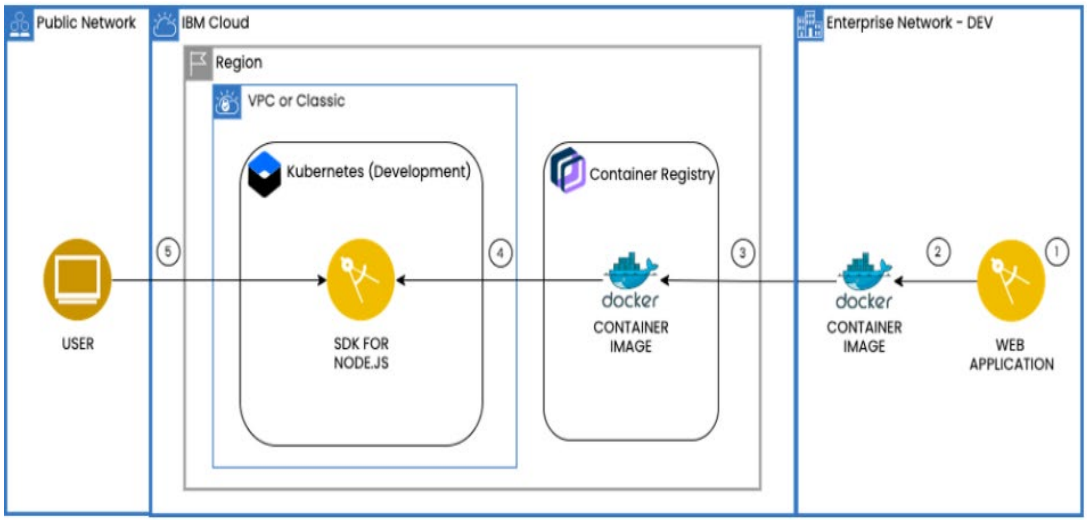



**Fig 5.2.2. TECHNIICAL ARCHITECTURE**

The Fig 5.2.2 describes about the structure, components, and interactions of a system or software application.

## 5.3 USER STORIES

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Team Member |
|---|---|---|---|---|---|---|
| Photography Enthusiast | Enhancing photo lighting and color | USN-1 | As a photography enthusiast, I want to be able to adjust the lighting and color in my photos, so that they look more professional and eye-catching. | The user should be able to adjust the brightness, contrast, saturation, and color temperature of their photo. They should be able to preview the changes in real-time and easily revert to the original image if desired. | High | Dilip S |
| Social Media Influencer | Blemish and imperfection removal | USN-2 | As a social media influencer, I want to be able to remove blemishes and imperfections from my photos, so that my followers see me in the best possible light. | The user should be able to use the healing brush tool or other retouching tools to remove blemishes, scars, and other imperfections from their photo. The edited photo should look natural and not distorted. | High | Dilip S |

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Team Member |
|---|---|---|---|---|---|---|
| Graphic Designer | Image cropping and resizing | USN-3 | As a graphic designer, I want to be able to crop and resize images to fit specific design requirements, so that I can create visually appealing designs that meet client specifications. | The user should be able to crop the image to a specific size or aspect ratio. They should also be able to resize the image without distorting its aspect ratio. The user should be able to preview the changes in real-time and export the edited image in the desired file format. | Medium | Bharath Vishnu C J |
| Real Estate Agent | Object removal | USN-4 | As a real estate agent, I want to be able to remove clutter and distractions from my property photos, so that potential buyers can focus on the features of the property. | The user should be able to remove unwanted objects from the photo, such as furniture, clutter, and other distractions. The edited photo should look natural and not distorted. | Medium | Baranidharan V M |

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Team Member |
|---|---|---|---|---|---|---|
| Fashion Blogger | Exposure and contrast adjustment | USN-5 | As a fashion blogger, I want to be able to adjust the exposure and contrast in my photos, so that my outfits stand out and my photos look professional. | The user should be able to adjust the exposure, contrast, and highlights and shadows in their photo. They should be able to preview the changes in real-time and easily revert to the original image if desired. | High | Barath B |
| Small Business Owner | Product photo editing | USN-6 | As a small business owner, I want to be able to create visually appealing product photos, so that I can attract more customers and increase sales. | The user should be able to adjust the lighting, color, and other photo settings to create visually appealing product photos. They should be able to easily export the edited photo in the desired file format and resolution. | Medium | Bharath Vishnu C J |

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Team Member |
|---|---|---|---|---|---|---|
| Wedding Photographer | Object removal | USN-7 | As a wedding photographer, I want to be able to remove unwanted objects from my photos, so that the focus is on the happy couple and their special day. | The user should be able to remove unwanted objects from the photo, such as people, signs, or other distractions. The edited photo should look natural and not distorted. The user should also be able to clone and duplicate parts of the photo to fill in any gaps created by the object removal. | High | Dilip S |
| Customer Care Executive | | | | | | |
| Administrator | | | | | | |

# CODING AND SOLUTION

# CHAPTER – 6

# CODING AND SOLUTION

## 6.1 FEATURE 1

The intelligent image enhancement tool in the Pixel Perfection platform, involves the use of advanced algorithms and image processing techniques. Here's an overview of the coding and solutioning involved in implementing this feature:

### 1. Image Analysis:

To perform intelligent image enhancement, the platform uses algorithms to analyze the image and extract relevant information. This analysis includes color analysis, histogram equalization, and edge detection algorithms to identify areas that require enhancement.

### 2. Color Correction:

The platform applies color correction techniques to adjust the color balance and remove any color casts present in the image. This involves manipulating color channels, applying white balance algorithms, and ensuring consistent and natural-looking colors throughout the image.

### 3. Contrast and Brightness Adjustment:

Algorithms are implemented to adjust the contrast and brightness of the image. This includes techniques such as histogram stretching, gamma correction, and adaptive contrast enhancement to optimize the tonal range and improve overall image appearance.

### 4. Sharpening and Clarity Enhancement:

To enhance image details, the platform utilizes sharpening and clarity enhancement algorithms. These algorithms selectively enhance edges and textures while minimizing noise and artifacts. Techniques like unsharp masking and edge enhancement filters are employed to achieve this.

## 6.2 FEATURE 2

This feature allows users to apply a variety of artistic filters and effects to their photos, transforming them into unique visual creations. Here's an overview of the coding and solutioning involved in implementing this feature:

### 1. Filter Library:

The platform includes a library of creative filters and effects that users can choose from. Each filter is implemented as a set of algorithms that manipulate the image pixels to achieve a specific visual style or effect. Examples include vintage filters, black and white conversions, color grading effects, and artistic textures.

### 2. Real-Time Rendering:

To provide a seamless user experience, the creative filters and effects are applied in real-time, allowing users to preview the changes instantly. This involves implementing efficient algorithms and optimizing the code to ensure smooth and responsive performance, even with computationally intensive filters.

### 3. Filter Customization:

The platform allows users to customize the applied filters and effects to suit their preferences. This involves implementing sliders, input fields, or other interactive elements in the user interface to adjust parameters such as intensity, color balance, texture strength, or grain amount. Users can dynamically modify these parameters and observe the changes in real-time.

### 4. Layering and Blending:

The creative filters and effects can be applied in layers, enabling users to stack multiple filters and effects to create complex and unique visual compositions. The platform implements algorithms for layer management and blending modes, allowing users to control the opacity, blending style, and ordering of the applied filters.

# RESULTS

# CHAPTER – 7

# RESULTS

## 7.1 PERFORMANCE METRICS

| S. No | Project Name | Scope/ feature | Functional Changes | Hardware Changes | Software Changes | Impact of Downtime | Load/ Volume Changes | Risk Score | Justification |
|---|---|---|---|---|---|---|---|---|---|
| **1.** | Pixel perfection: transforming your photos with our cutting-edge image editing platform | New | Moderate | No Change | Low | - | >30%to 50% | Orange | Changes have been observed |
| **2.** | Pixel perfection: transforming your photos with our cutting-edge image editing platform | New | Low | No Change | Low | - | >40%to 60% | Orange | Changes have been observed |
| **3.** | Pixel perfection: transforming your photos with our cutting-edge image editing platform | New | Low | No Change | Low | - | >20%to 50% | Orange | Changes have been observed |

| S. No | Project Overview | NFT Test Approach | Assumption/ Dependencies/ Risks | Approvals/Signoff |
|---|---|---|---|---|
| **1.** | Pixel perfection: transforming your photos with our cutting-edge image editing platform | Usability | Low | DILIP S |
| **2.** | Pixel perfection: transforming your photos with our cutting-edge image editing platform | Scalability | Low | BHARATH VISHNU C J |

| S. No | Project Overview | NFT Test Approach | NFT-MIET | Test Outcome | GO/ NO-GO Decision | Recommendation | Identified Defects( Detected/ Closed/ Open) | Approvals/Signoff |
|---|---|---|---|---|---|---|---|---|
| **1.** | Pixel perfection: transforming your photos with our cutting-edge image editing platform | Scalability | Yes | Good | **-** | Increase number Of pods | Closed | BARATH B |

# ADVANTAGES & DISADVANTAGES

# CHAPTER – 8

# ADVANTAGES & DISADVANTAGES

## ADVANTAGES OF PIXEL PERFECTION: TRANSFORMING YOUR PHOTOS WITH OUR CUTTING-EDGE IMAGE EDITING PLATFORM

**1. Professional-Level Editing:** Pixel Perfection provides users with advanced editing tools and features that enable them to achieve professional-level results. The platform incorporates intelligent image enhancement, creative filters, and effects, empowering users to transform their photos into visually stunning masterpieces.

**2. Ease of Use:** The platform offers a user-friendly interface and intuitive controls, making it accessible to both beginners and experienced users. The tools and features are designed to be easy to understand and navigate, allowing users to quickly enhance their photos without a steep learning curve.

**3. Time Efficiency:** Pixel Perfection optimizes the editing process by utilizing advanced algorithms and real-time rendering. This allows users to make adjustments, apply filters, and see instant previews, saving valuable time and increasing productivity.

**4. Personalization and Customization:** The platform enables users to personalize their editing experience by allowing customization of filters, adjustments, and settings. Users can save their preferred settings as presets, making it convenient to achieve consistent results and streamline their editing workflow.

**5. Cutting-Edge Technology:** Pixel Perfection leverages cutting-edge technologies, such as AI-based image analysis and enhancement algorithms. These technologies enable the platform to deliver high-quality results with improved color accuracy, contrast, and sharpness.

## DISADVANTAGES OF PIXEL PERFECTION: TRANSFORMING YOUR PHOTOS WITH OUR CUTTING-EDGE IMAGE EDITING PLATFORM

**1. Internet Connectivity Requirement:** Pixel Perfection is an online image editing platform, which means it requires a stable internet connection to access and use its features. Limited or unreliable internet connectivity can hinder the user's ability to edit photos or access their account.

**2. Dependency on Server Availability:** As an online platform, Pixel Perfection relies on its servers for processing and storing user data. If the servers experience downtime or technical issues, users may be unable to access their photos or experience delays in editing.

**3. Limited Offline Editing:** Since Pixel Perfection primarily operates as an online platform, offline editing capabilities may be limited. Users may not be able to access all features and tools without an internet connection.

**4. Compatibility Constraints:** Pixel Perfection's compatibility may vary across different devices, operating systems, and web browsers. Users may encounter compatibility issues or limitations when accessing the platform on certain devices or browsers.

# CONCLUSION

# CHAPTER – 9

# CONCLUSION

In conclusion, Pixel Perfection is a cutting-edge image editing platform that aims to transform users' photos into stunning visual creations. The project report format for Pixel Perfection highlights the key aspects of the platform, from its purpose and ideation to the implementation of features and database schema.

Throughout the project, the team has focused on providing users with a professional-level editing experience while ensuring ease of use and efficiency. The intelligent image enhancement feature utilizes advanced algorithms to analyze and enhance photos automatically, while the creative filters and effects tool offers a wide range of artistic options for customization. The database schema efficiently manages user accounts, photos, edits, and other relevant information.

The platform's advantages lie in its professional-level editing capabilities, user-friendly interface, time efficiency, personalization options, and the utilization of cutting-edge technology. However, there are also some disadvantages, such as the dependency on internet connectivity, limited offline editing, and potential compatibility constraints.

Overall, Pixel Perfection offers a powerful and user-friendly solution for enhancing and transforming photos. By continuously monitoring performance metrics, gathering user feedback, and addressing any limitations, the project team can further improve the platform's functionality, usability, and user satisfaction.

# FUTURE SCOPE

# CHAPTER – 10

# FUTURE SCOPE

In the future, Pixel Perfection has several areas for expansion and improvement. Firstly, the platform can introduce advanced editing tools to provide users with more options and control over their edits. Integrating with popular cloud storage platforms and social media platforms would enhance convenience and connectivity for users. The addition of custom presets and templates would streamline editing workflows, while collaboration features would foster a creative community. Developing a dedicated mobile app would cater to the growing demand for mobile editing. Implementing machine learning algorithms could offer intelligent editing suggestions, and exploring augmented reality technology would provide a more immersive editing experience. Integration with stock photo libraries and advancing image analysis techniques would further enhance the platform's capabilities. Overall, these future scope opportunities would solidify Pixel Perfection's position as a cutting-edge image editing platform.

# APPENDIX

# CHAPTER – 11

# APPENDIX

## 11.1 SOURCE CODE

### app.py:

```
# Importing the python modules
from flask import *
import ibm_db
import requests
import os
import re
# import numpy as np
# import base64
# from flask import session

app=Flask(__name__)

# API keys
RAPIDAPI_KEY='2b7505b88cmsh9389518520d516ap17b23ejsn80a5c3c85180'
RAPIDAPI_KEY1='714250c24fmsh829f65c05932f01p1ad65cjsn43a39e64b3bb'
RAPIDAPI_KEY2='d73283ca42msh25142662f0dd1eap11bde4jsnbe1a5c63f516'
RAPIDAPI_KEY3='31dfff2899msh3849415864bc766p188f0djsn3347d5121717'

#db connection
conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=764264db-9824-4b7c-82df-
40d1b13897c2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=32536;SEC
URITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=vpt96087;PWD=l
6Sj2Ojt5s6xih9p",'','')
print(conn)
print("connection successful...")

app.secret_key='bharath'
global user


@app.route('/', methods=['POST','GET'])
def homepage():
    return render_template('index.html')


@app.route('/home', methods=['POST','GET'])
def after_login():
```

```
    return render_template('home.html')


@app.route('/login', methods=['POST','GET'])
def login_page():
    msg = ''
    if request.method == "POST":
        EMAIL = request.form["email"]
        PASSWORD = request.form["password"]
        sql = "SELECT * FROM USER1 WHERE EMAIL=? AND PASSWORD=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, EMAIL)
        ibm_db.bind_param(stmt, 2, PASSWORD)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            session['Loggedin'] = True
            session['USERD'] = account['USERD']
            session['NAME'] = account['NAME']
            msg = "logged in successfully !"
            return redirect(url_for('after_login'))
        else:
            msg = "Incorrect Email/password"
            return render_template('login.html', msg=msg)
    return render_template('login.html', msg=msg)


@app.route('/register', methods=['POST','GET'])
def register_page():
    msg = ''
    if request.method == 'POST':
        NAME = request.form["name"]
        EMAIL = request.form["email"]
        PASSWORD = request.form["password"]
        sql = "SELECT* FROM USER1 WHERE EMAIL= ? AND PASSWORD=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, EMAIL)
        ibm_db.bind_param(stmt, 2, PASSWORD)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            msg = "Your deatils are already exists in the database Please
login"
            return render_template('login.html')
        elif not re.match(r'[^@]+@[^@]+\.[^@]+', EMAIL):
            msg = "Invalid Email Address!"
        else:
```

```
            sql = "SELECT count(*) FROM USER1"
            stmt = ibm_db.prepare(conn, sql)
            ibm_db.execute(stmt)
            length = ibm_db.fetch_assoc(stmt)
            print(length)
            insert_sql = "INSERT INTO USER1(NAME,EMAIL,PASSWORD) VALUES
(?,?,?)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, NAME)
            ibm_db.bind_param(prep_stmt, 2, EMAIL)
            ibm_db.bind_param(prep_stmt, 3, PASSWORD)
            ibm_db.execute(prep_stmt)
            msg = "Successfully registed!"
            return render_template('login.html', msg=msg)
    return render_template('register.html', msg=msg)


@app.route('/removebg', methods=['POST','GET'])
def removeback():
    global USERD
    url = "https://product-background-
removal.p.rapidapi.com/cutout/commodity/commodity"

    # sql = "SELECT * FROM USER1 WHERE USERD=" +str(session['USERD'])
    sql = "SELECT * FROM USER1 WHERE USERD=" +str(session.get('USERD', -
1))
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    print(account)
    # account = True
    if account:
            user='Loggedin'
            print('loggegin')
            if request.method == "POST":
                # user='Loggedin'
                print(user)
                file = request.files["filename"]
                print(file)
                image_option = request.form["return_form"]
                payload = {
                        'image': ('image',file),
                        'return_form':image_option
                    }
                headers = {
                    'X-RapidAPI-Key': RAPIDAPI_KEY,
                    "X-RapidAPI-Host": "product-background-
removal.p.rapidapi.com"
                }
```

```
                response = requests.post(url,
headers=headers,files=payload)
                output=response.json()
                print(output)
                # print(type(output))    # should be a dictionary
                # print(dir(output))     # should show the keys of the
dictionary
                image_output = output['data']['image_url']
                print(image_output)
                IMAGE_BG=image_output
                insert_sql = "INSERT INTO IMAGE_URL VALUES
(?,?,NULL,NULL,NULL,NULL,NULL,NULL)"
                prep_stmt = ibm_db.prepare(conn, insert_sql)
                ibm_db.bind_param(prep_stmt, 1, account['USERD'])
                ibm_db.bind_param(prep_stmt, 2, IMAGE_BG)
                ibm_db.execute(prep_stmt)
                print('image_url sent to db2')
                # image_b64 = base64.b64encode(file.read()).decode('utf-
8')
                # file.save(file.filename)
                return
render_template('removebg.html',image_o=image_output,user=user)
            return render_template('removebg.html',user=user)
    else:
            # user='none'
            if request.method == "POST":
                file = request.files["filename"]
                print(file)
                image_option = request.form.get("return_form")
                payload = {
                        'image': ('image',file),
                        'return_form': ('mask','whiteBK',image_option)
                    }
                headers = {
                    'X-RapidAPI-Key': RAPIDAPI_KEY,
                    "X-RapidAPI-Host": "product-background-
removal.p.rapidapi.com"
                }
                response = requests.post(url,
headers=headers,files=payload)
                output=response.json()
                print(output)
                image_output = output['data']['image_url']
                print(image_output)
                # image_b64 = base64.b64encode(file.read()).decode('utf-
8')
                # file.save(file.filename)
```

```
                return
render_template('removebg.html',image_o=image_output)
    return render_template('removebg.html')

@app.route('/vehicleremove', methods=['POST','GET'])
def vehicle_bg():
    url = "https://vehicle-background-
removal.p.rapidapi.com/cutout/universal/vehicle"
    sql = "SELECT * FROM USER1 WHERE USERD=" +str(session.get('USERD', -
1))
    # sql = "SELECT * FROM USER1 WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    print(account)
    # account = True
    if account:
        user='Loggedin'
        print('loggegin')
        if request.method == "POST":
            user='Loggedin'
            file = request.files["filename"]
            print(file)
            # file1=file
            payload = {
                    'image': ('image',file)
                }
            headers = {
                'X-RapidAPI-Key': RAPIDAPI_KEY,
                "X-RapidAPI-Host": "vehicle-background-
removal.p.rapidapi.com"
            }
            response = requests.post(url, headers=headers,files=payload)
            output=response.json()
            print(output)
            image_input =
output['data']['elements'][0]['origin_image_url']
            image_output = output['data']['elements'][0]['image_url']
            print(image_output)
            print(image_input)
            VEHICLE_BG=image_output

            insert_sql = "INSERT INTO IMAGE_URL VALUES
(?,NULL,?,NULL,NULL,NULL,NULL,NULL)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, account['USERD'])
            ibm_db.bind_param(prep_stmt, 2, VEHICLE_BG)
            ibm_db.execute(prep_stmt)
```

```
            print('image_url sent to db2')
            # image_b64 = base64.b64encode(file.read()).decode('utf-8')
            # file1.save(file1.filename)
            return
render_template('vehicleremove.html',image_o=image_output,image_i=image_in
put,user=user)
        return render_template('vehicleremove.html',user=user)
    else:
        if request.method == "POST":
            user='Loggedin'
            file = request.files["filename"]
            print(file)
            # file1=file
            payload = {
                    'image': ('image',file)
                }
            headers = {
                'X-RapidAPI-Key': RAPIDAPI_KEY,
                "X-RapidAPI-Host": "vehicle-background-
removal.p.rapidapi.com"
            }
            response = requests.post(url, headers=headers,files=payload)
            output=response.json()
            print(output)
            image_input =
output['data']['elements'][0]['origin_image_url']
            image_output = output['data']['elements'][0]['image_url']
            print(image_output)
            print(image_input)
            # image_b64 = base64.b64encode(file.read()).decode('utf-8')
            # file1.save(file1.filename)
            return
render_template('vehicleremove.html',image_o=image_output,image_i=image_in
put,user=user)

    return render_template('vehicleremove.html')

@app.route('/beauty_img', methods=['POST','GET'])
def beauty_image():
    url = "https://ai-skin-beauty.p.rapidapi.com/face/editing/retouch-
skin"
    sql = "SELECT * FROM USER1 WHERE USERD=" +str(session.get('USERD', -
1))
    # sql = "SELECT * FROM USER1 WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    print(account)
```

```
    if account:
    # if account['USERD']== session['USERD']:
        user='Loggedin'
        print('loggegin')
        if request.method == "POST":
            file = request.files["filename"]
            Retouch_degree=request.form['number']
            Whitening_degree=request.form['number1']
            print(file)
            # option = request.form.get("return_form")
            payload = {
                    'image': ('image',file),
                    'Retouch_degree': ('',Retouch_degree),
                    'Whitening_degree': ('',Whitening_degree)
                }
            headers = {
                'X-RapidAPI-Key': RAPIDAPI_KEY,
                "X-RapidAPI-Host": "ai-skin-beauty.p.rapidapi.com"
            }
            response = requests.post(url, headers=headers,files=payload)
            output=response.json()
            print(output)
            image_output = output['data']['image_url']
            print(image_output)
            SKIN_BEAUTY =image_output
            insert_sql = "INSERT INTO IMAGE_URL VALUES
(?,NULL,NULL,NULL,?,NULL,NULL,NULL)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, account['USERD'])
            ibm_db.bind_param(prep_stmt, 2, SKIN_BEAUTY )
            ibm_db.execute(prep_stmt)
            print('image_url sent to db2')
            # image_b64 = base64.b64encode(file.read()).decode('utf-8')
            # file.save(file.filename)
            return
render_template('beauty_img.html',image_o=image_output,user=user)
        return render_template('beauty_img.html',user=user)
    else:
         if request.method == "POST":
            file = request.files["filename"]
            Retouch_degree=request.form['number']
            Whitening_degree=request.form['number1']
            print(file)
            # option = request.form.get("return_form")
            payload = {
                    'image': ('image',file),
                    'Retouch_degree': ('',Retouch_degree),
                    'Whitening_degree': ('',Whitening_degree)
```

```
                }
            headers = {
                'X-RapidAPI-Key': RAPIDAPI_KEY,
                "X-RapidAPI-Host": "ai-skin-beauty.p.rapidapi.com"
            }
            response = requests.post(url, headers=headers,files=payload)
            output=response.json()
            print(output)
            image_output = output['data']['image_url']
            print(image_output)
            # image_b64 = base64.b64encode(file.read()).decode('utf-8')
            # file.save(file.filename)
            return render_template('beauty_img.html',image_o=image_output)
    return render_template('beauty_img.html')


@app.route('/cartoon_img', methods=['POST','GET'])
def cartoon_image():

    url = "https://cartoon-yourself.p.rapidapi.com/facebody/api/portrait-
animation/portrait-animation"

    sql = "SELECT * FROM USER1 WHERE USERD=" +str(session.get('USERD', -
1))
    # sql = "SELECT * FROM USER1 WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    print(account)
    if account:
        user='Loggedin'
        print('loggegin')
        if request.method == "POST":
            # user='Loggedin'
            file = request.files["filename"]
            print(file)
            option = request.form["return_form"]
            print(option)
            payload = {
                    'image': (file),
                    'type': (option)
                }
            headers = {
                'X-RapidAPI-Key': RAPIDAPI_KEY3,
                "X-RapidAPI-Host": "cartoon-yourself.p.rapidapi.com"
            }
            response = requests.post(url, headers=headers,files=payload)
            print(response)
            output=response.json()
```

```
            print(output)
            # try:
            #     output = response.json()
            # except json.decoder.JSONDecodeError as e:
            #     print(f"Failed to decode response: {e}")
            #     output = {}
            print(type(output))
            print(dir(output))
            image_output = output['data']['image_url']
            print(image_output)
            CARTOON_IMG=image_output
            insert_sql = "INSERT INTO IMAGE_URL VALUES
(?,NULL,NULL,?,NULL,NULL,NULL,NULL)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, account['USERD'])
            ibm_db.bind_param(prep_stmt, 2, CARTOON_IMG)
            ibm_db.execute(prep_stmt)
            print('image_url sent to db2')
            return
render_template('cartoon_img.html',image_o=image_output, user=user)
        return render_template('cartoon_img.html',user=user)
    else:
        if request.method == "POST":
            user='Loggedin'
            file = request.files["filename"]
            print(file)
            option = request.form["return_form"]
            payload = {
                    'image': ('image',file),
                    'return_form': ('anime',option)
                }
            headers = {
                'X-RapidAPI-Key': RAPIDAPI_KEY3,
                "X-RapidAPI-Host": "cartoon-yourself.p.rapidapi.com"
            }
            response = requests.post(url, headers=headers,files=payload)
            output=response.json()
            print(output)
            image_output = output['data']['image_url']
            print(image_output)
            # image_b64 = base64.b64encode(file.read()).decode('utf-8')
            # file.save(file.filename)
            return
render_template('cartoon_img.html',image_o=image_output, user=user)
    return render_template('cartoon_img.html')

@app.route('/beauty_images')
def beauty_img_ai():
```

```
    user='login'
    # user='loggedin'
    sql = "SELECT * FROM IMAGE_URL WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    row = []
    while True:
        data = ibm_db.fetch_assoc(stmt)
        if not data:
            break
        else:
            row.append(data)
    print('rows: ', row)
    return render_template("My_images.html", rows=row, user1=user)

@app.route('/remove_bg_images')
def remove_bg_images():
    user1='login'
    # user='loggedin'
    sql = "SELECT * FROM IMAGE_URL WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    row = []
    while True:
        images_url = ibm_db.fetch_assoc(stmt)
        if not images_url:
            break
        else:
            row.append(images_url)
    print('rows: ', row)
    return render_template("My_images.html", row1=row, user1=user1)

@app.route('/vehicle_images')
def vehicle_img_ai():
    user1='login'
    # user='loggedin'
    sql = "SELECT * FROM IMAGE_URL WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    row = []
    while True:
        data = ibm_db.fetch_assoc(stmt)
        if not data:
            break
        else:
            row.append(data)
    print('rows: ', row)
    return render_template("My_images.html", row2=row, user1=user1)
```

```
@app.route('/cartoon_images')
def cartoon_img_ai():
    user1='login'
    # user='loggedin'
    sql = "SELECT * FROM IMAGE_URL WHERE USERD=" +str(session['USERD'])
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.execute(stmt)
    row = []
    while True:
        data = ibm_db.fetch_assoc(stmt)
        if not data:
            break
        else:
            row.append(data)
    print('rows: ', row)
    return render_template("My_images.html", row3=row, user1=user1)


@app.route('/logout')
def logout():
    session.pop('loggedin', None)
    session.pop('USERD', None)
    return render_template('index.html')


if __name__=='__main__':
    app.run(host='0.0.0.0', debug=True)
```

## index.html :

```
<!DOCTYPE html>
<html lang="en">

  <head>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;40
0;500;600;700;800;900&display=swap" rel="stylesheet">

    <title>Pixel Perfection: Transforming your photos with our cutting-
edge image editing platform</title>
```

```
    <link href="static/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">


    <link rel="stylesheet" href="static/assets/css/fontawesome.css">
    <link rel="stylesheet" href="static/assets/css/templatemo-574-
mexant.css">
    <link rel="stylesheet" href="static/assets/css/owl.css">
    <link rel="stylesheet" href="static/assets/css/animate.css">
    <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-
bundle.min.css">
  </head>

<body>


  <header class="header-area header-sticky">
      <div class="container">
          <div class="row">
              <div class="col-12">
                  <nav class="main-nav">
                      <ul class="nav">
                          <li class="scroll-to-section"><a href="#top"
class="active">Home</a></li>
                          <li class="scroll-to-section"><a
href="#about">About</a></li>

                          {% if user == 'Loggedin' %}
                          <li><a href="/logout">logout</a></li>
                          {% else %}
                          <li><a href="/login">login</a></li>
                          {% endif %}
                      </ul>
                      <a class='menu-trigger'>
                          <span>Menu</span>
                      </a>
                  </nav>
              </div>
          </div>
      </div>
  </header>

  <div class="swiper-container" id="top">
    <div class="swiper-wrapper">
      <div class="swiper-slide">
        <div class="slide-inner" style="background-
image:url(https://images.pexels.com/photos/2085998/pexels-photo-
2085998.jpeg)">
          <div class="container">
```

```
            <div class="row">
              <div class="col-lg-8">
                <div class="header-text">
                  <h2><em>Pixel</em> Perfection</h2>>
                  <h4> Transforming Your Photos Of Our Cutting-Edge Image
<em>Editing Platform </em></h4>

                  <div class="div-dec"></div>
                  <p>Pixel Perfection is an innovative image editing
platform that allows users to transform their photos with ease and
precision. Our cutting-edge software provides a wide range of tools and
features that enable users to edit their images to achieve pixel-perfect
results. Whether you're a professional photographer, graphic designer, or
just someone who loves to take photos, Pixel Perfection is the perfect
tool for enhancing your images. With its intuitive user interface and
powerful editing tools, you can easily adjust or remove your image
backgrounds, car image backgrounds, Cartoon your face &  Face beauty, and
more to create stunning images that are sure to impress.</p>

                </div>
              </div>
            </div>
          </div>
        </div>
      </div>


      </div>
    </div>
    <div class="swiper-button-next swiper-button-white"></div>
    <div class="swiper-button-prev swiper-button-white"></div>
  </div>


  <section class="simple-cta">
    <div class="container">
      <div class="row">
        <div class="col-lg-5">
          <h4>Please <em>Login</em> to use our <strong>Editing
Platform</strong> </h4>
        </div>
        <div class="col-lg-7">
          <div class="buttons">

            <div class="orange-button">
              <a href="/login">login</a>
            </div>
          </div>
        </div>
```

```
      </div>
    </div>
  </section>

  <section class="about-us" id="about">
    <div class="container">
      <div class="row">
        <div class="col-lg-6 offset-lg-3">
          <div class="section-heading">
            <h6>About Us</h6>
            <h4>Know Us Better</h4>
          </div>
        </div>
        <div class="col-lg-4">
          <div class="right-content">
            <h4>Team Mates</h4>
            <p>Team Lead - BHARATH VISHNU C J<br>Team Member 01 : BARANI
DHARAN V M<br>Team member 02 - BARATH B<br>Team member 03 - DILIP S</p>

          </div>
        </div>
        <div class="col-lg-8">
          <div class="naccs">
            <div class="tabs">
              <div class="row">
                <div class="col-lg-12">
                  <div class="menu">
                    <div class="gradient-border"><span>Cartoon your
images</span></div>
                    <div class="active gradient-border"><span>Remove
Backgroud</span></div>
                    <div class="gradient-border"><span>AI Image
Generator</span></div>
                  </div>
                </div>
                <div class="col-lg-12">
                  <ul class="nacc">
                    <li>
                      <div>
                        <div class="main-list">
                          <img src="https://toonify.photos/social.jpg"
alt="">

                        </div>

                      </div>
                    </li>
                    <li class="active">
```

```
                    <div>
                      <div class="main-list">
                        <img
src="https://www.slazzer.com/static/images/home-page/home_banner.jpg"
alt="">

                      </div>
                    </li>
                    <li>
                      <div>
                        <div class="main-list">
                          <img
src="https://www.thestar.com/content/dam/thestar/business/technology/2022/
12/01/these-ai-images-look-just-like-me-what-does-that-mean-for-the-
future-of-deepfakes/_1_ai_art_befake_main.jpg" alt="ai image">

                      </div>
                    </div>
                  </li>
                </ul>
              </div>
            </div>
          </div>
        </div>

      </div>
    </div>
  </section>

  <footer>
    <div class="container">
      <div class="row">
        <div class="col-lg-12">
          <p>Copyright @The-Achievers All Rights Reserved.

        </div>
      </div>
    </div>
  </footer>
    <script src="static/vendor/jquery/jquery.min.js"></script>
    <script
src="static/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

    <script src="static/assets/js/isotope.min.js"></script>
    <script src="static/assets/js/owl-carousel.js"></script>

    <script src="static/assets/js/tabs.js"></script>
```

```
    <script src="static/assets/js/swiper.js"></script>
    <script src="static/assets/js/custom.js"></script>
    <script>
        var interleaveOffset = 0.5;

      var swiperOptions = {
        loop: true,
        speed: 1000,
        grabCursor: true,
        watchSlidesProgress: true,
        mousewheelControl: true,
        keyboardControl: true,
        navigation: {
          nextEl: ".swiper-button-next",
          prevEl: ".swiper-button-prev"
        },
        on: {
          progress: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              var slideProgress = swiper.slides[i].progress;
              var innerOffset = swiper.width * interleaveOffset;
              var innerTranslate = slideProgress * innerOffset;
              swiper.slides[i].querySelector(".slide-
inner").style.transform =
                "translate3d(" + innerTranslate + "px, 0, 0)";
            }
          },
          touchStart: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = "";
            }
          },
          setTransition: function(speed) {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = speed + "ms";
              swiper.slides[i].querySelector(".slide-
inner").style.transition =
                speed + "ms";
            }
          }
        }
      };

      var swiper = new Swiper(".swiper-container", swiperOptions);
    </script>
```

```
  </body>
</html>
```

## register.html:

```
<!DOCTYPE html>
<html lang="en">

  <head>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;40
0;500;600;700;800;900&display=swap" rel="stylesheet">

    <title>Pixel Perfection: Transforming your photos with our cutting-
edge image editing platform</title>


    <link href="static/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">


    <link rel="stylesheet" href="static/assets/css/fontawesome.css">
    <link rel="stylesheet" href="static/assets/css/templatemo-575-
mexant.css">
    <link rel="stylesheet" href="static/assets/css/owl.css">
    <link rel="stylesheet" href="static/assets/css/animate.css">
    <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-
bundle.min.css">
  </head>

<body>


  <header class="header-area header-sticky">
      <div class="container">
          <div class="row">
              <div class="col-12">
                  <nav class="main-nav">

                      <ul class="nav">
```

```
                        <li class="scroll-to-section"><a href="/"
class="active">Home</a></li>
                        <li class="scroll-to-section"><a
href="#about">About</a></li>

                        <li><a href="/login">Login</a></li>
                    </ul>
                    <a class='menu-trigger'>
                        <span>Menu</span>
                    </a>

                </nav>
            </div>
        </div>
    </div>
  </header>

  <section id="register" class="calculator" style="cursor: pointer;">
    <div class="container">
      <div class="row">
        <div class="col-lg-7">
          <div class="left-image">
            <img src="static/assets/images/calculator-image.png" alt="">
          </div>
        </div>
        <div class="col-lg-5">
          <div class="section-heading">

            <h4>Register here</h4>
          </div>
          <form id="calculate" action="/register" method="POST"
style="cursor: context-menu">
            <div class="row">
                <div class="col-lg-12">
                    <fieldset>
                      <label for="msg">{{msg}}</label>
                    </fieldset>
                  </div>
              <div class="col-lg-12">
                <fieldset>
                  <label for="email">Enter Your Name</label>
                  <input type="text" name="name" id="name" required="">
                </fieldset>
              </div>
              <div class="col-lg-12">
                <fieldset>
                  <label for="email">Enter Your Email</label>
```

```
                  <input type="text" name="email" id="email" pattern="[^
@]*@[^ @]*" placeholder="youremail@gmail.com" required="">
                </fieldset>
              </div>
              <div class="col-lg-12">
                <fieldset>
                  <label for="password">Enter Your Password</label>
                  <input type="passowrd" name="password" id="subject"
placeholder="">
                </fieldset>
              </div>
              <div class="col-lg-12">
              </fieldset>
              </div>
              <div class="col-lg-6">

                  <button type="submit" id="form-submit" class="orange-
button">Submit Now</button>

              </div><br><br>
              <div class="col-lg-12">
                <fieldset>
                    <label for="login">Already have an account?<a
href="/login">Click</a></label>

                </fieldset>
              </div>
            </div>

          </form>
        </div>
      </div>
    </div>
  </section>

    <script src="static/vendor/jquery/jquery.min.js"></script>
    <script
src="static/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

    <script src="static/assets/js/isotope.min.js"></script>
    <script src="static/assets/js/owl-carousel.js"></script>

    <script src="static/assets/js/tabs.js"></script>
    <script src="static/assets/js/swiper.js"></script>
    <script src="static/assets/js/custom.js"></script>
    <script>
        var interleaveOffset = 0.5;
```

```
      var swiperOptions = {
        loop: true,
        speed: 1000,
        grabCursor: true,
        watchSlidesProgress: true,
        mousewheelControl: true,
        keyboardControl: true,
        navigation: {
          nextEl: ".swiper-button-next",
          prevEl: ".swiper-button-prev"
        },
        on: {
          progress: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              var slideProgress = swiper.slides[i].progress;
              var innerOffset = swiper.width * interleaveOffset;
              var innerTranslate = slideProgress * innerOffset;
              swiper.slides[i].querySelector(".slide-
inner").style.transform =
                "translate3d(" + innerTranslate + "px, 0, 0)";
            }
          },
          touchStart: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = "";
            }
          },
          setTransition: function(speed) {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = speed + "ms";
              swiper.slides[i].querySelector(".slide-
inner").style.transition =
                speed + "ms";
            }
          }
        }
      };

      var swiper = new Swiper(".swiper-container", swiperOptions);
    </script>
  </body>
</html>
```

## login.html:

```
<!DOCTYPE html>
<html lang="en">

  <head>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;40
0;500;600;700;800;900&display=swap" rel="stylesheet">

    <title>Pixel Perfection: Transforming your photos with our cutting-
edge image editing platform</title>


    <link href="static/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">


    <link rel="stylesheet" href="static/assets/css/fontawesome.css">

    <link rel="stylesheet" href="static/assets/css/owl.css">
    <link rel="stylesheet" href="static/assets/css/animate.css">
    <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-
bundle.min.css">
    <link rel="stylesheet" href="static/assets/css/templatemo-575-
mexant.css">
  </head>
<body>

  <header class="header-area header-sticky">
      <div class="container">
          <div class="row">
              <div class="col-12">
                  <nav class="main-nav">

                      <ul class="nav">
                          <li class="scroll-to-section"><a href="/"
class="active">Home</a></li>
                          <li class="scroll-to-section"><a
href="#about">About</a></li>

                          <li><a href="/register">Register</a></li>
                      </ul>
```

```
                    <a class='menu-trigger'>
                        <span>Menu</span>
                    </a>

                </nav>
            </div>
          </div>
      </div>
  </header>

  <section id="register" class="calculator" style="cursor: pointer;">
    <div class="container">
      <div class="row">
        <div class="col-lg-7">
          <div class="left-image">

          </div>
        </div>
        <div class="col-lg-5">
          <div class="section-heading">

            <h4>Login here</h4>
          </div>
          <form id="calculate" action="/login" method="POST"
style="cursor: context-menu">
            <div class="row">
              <div class="col-lg-12">
                <fieldset>
                  <label for="msg">{{msg}}</label>
                </fieldset>
              </div>
              <div class="col-lg-12">
                <fieldset>
                  <label for="email">Enter Your Email</label>
                  <input type="text" name="email" id="email" pattern="[^
@]*@[^ @]*" placeholder="youremail@gmail.com" required="">
                </fieldset>
              </div>
              <div class="col-lg-12">
                <fieldset>
                  <label for="password">Enter Your Password</label>
                  <input type="passowrd" name="password" id="subject"
placeholder="">
                </fieldset>
              </div>
              <div class="col-lg-12">
              </fieldset>
              </div>
```

```
              <div class="col-lg-6">

                  <button type="submit" id="form-submit" class="orange-
button">Submit Now</button>

              </div><br><br>
              <div class="col-lg-12">
                <fieldset>
                    <label for="login">You don't Have an account ?<a
href="/register">Click</a></label>

                </fieldset>
              </div>
            </div>
            <div class="msg">{{ msg }}</div>
          </form>
        </div>
      </div>
    </div>
  </section>


    <script src="static/vendor/jquery/jquery.min.js"></script>
    <script
src="static/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

    <script src="static/assets/js/isotope.min.js"></script>
    <script src="static/assets/js/owl-carousel.js"></script>

    <script src="static/assets/js/tabs.js"></script>
    <script src="static/assets/js/swiper.js"></script>
    <script src="static/assets/js/custom.js"></script>
    <script>
        var interleaveOffset = 0.5;

      var swiperOptions = {
        loop: true,
        speed: 1000,
        grabCursor: true,
        watchSlidesProgress: true,
        mousewheelControl: true,
        keyboardControl: true,
        navigation: {
          nextEl: ".swiper-button-next",
          prevEl: ".swiper-button-prev"
        },
        on: {
          progress: function() {
```

```
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              var slideProgress = swiper.slides[i].progress;
              var innerOffset = swiper.width * interleaveOffset;
              var innerTranslate = slideProgress * innerOffset;
              swiper.slides[i].querySelector(".slide-
inner").style.transform =
                "translate3d(" + innerTranslate + "px, 0, 0)";
            }
          },
          touchStart: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = "";
            }
          },
          setTransition: function(speed) {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = speed + "ms";
              swiper.slides[i].querySelector(".slide-
inner").style.transition =
                speed + "ms";
            }
          }
        };

      var swiper = new Swiper(".swiper-container", swiperOptions);
    </script>
  </body>

</html>
```

## removebg.html:

```
<!DOCTYPE html>
<html lang="en">
<div class="my-class">
  <head>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
```

```
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;40
0;500;600;700;800;900&display=swap" rel="stylesheet">

    <title>Pixel Perfection: Transforming your photos with our cutting-
edge image editing platform</title>

    <link href="static/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">


    <link rel="stylesheet" href="static/assets/css/fontawesome.css">
    <link rel="stylesheet" href="static/assets/css/templatemo-574-
mexant.css">
    <link rel="stylesheet" href="static/assets/css/owl.css">
    <link rel="stylesheet" href="static/assets/css/animate.css">
    <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-
bundle.min.css">

  </head>

<body>



  <header class="header-area header-fixed background-header">
      <div class="container">
          <div class="row">
              <div class="col-12">
                  <nav class="main-nav">

                      <ul class="nav">
                          <li class="scroll-to-section"><a href='/',
class="active">Home</a></li>
                          {% if user == 'Loggedin' %}
                          <li class="scroll-to-section"><a
href="/remove_bg_images">My Images</a></li>
                          {% endif %}

                          <li class="scroll-to-section"><a
href="#about">About</a></li>
                          <li class="has-sub">
                              <a href="javascript:void(0)">IMAGE AI</a>
                              <ul class="sub-menu">
                                <li><a href="/removebg">Remove
Background</a></li>
                                <li><a href="/vehicleremove">Vehicle
Background</a></li>
```

```
                                <li><a href="/cartoon_img">Cartoon
yourself</a></li>
                                <li><a href="/beauty_img">AI Skin
Beauty</a></li>

                            </ul>
                        </li>
                        {% if user == 'Loggedin' %}
                        <li><a href="/logout">logout</a></li>

                        {% else %}
                        <li><a href="/login">login</a></li>
                        {% endif %}
                    </ul>
                    <a class='menu-trigger'>
                        <span>Menu</span>
                    </a>

                </nav>
            </div>
        </div>
    </div>
  </header>

  <section class="main-services">
    <div class="container">

      <div class="row">
        <div class="col-lg-12">
          <div class="service-item">
            <div class="row">
              <div class="col-lg-6">

                <div class="left-image">
                  <img src="{{image_o}}" alt="img after bg
remove"><br><br>
                  <img src=" {{ image_b64 }}"
alt="your image ">
                </div>
              </div>
              <div class="col-lg-6 align-self-center">
                <div class="right-text-content">
                  <i class="fa fa-upload"></i>
                  <h4>Upload Image</h4>
                  <form action="/removebg" method="POST"
enctype="multipart/form-data">
                    <input type="file" id="myFile"
name="filename"><br><br>
```

```
                    <p>NOTE:- Image format: JPEG, JPG, PNG(8-bit, 16-bit,
64-bit PNG not supported), BMP, WEBP. <br>
                      Image size: no more than 3 MB.<br>
                      Image resolution: less than 1280 x 1280
pixels.</p><br>
                    <label for="return_form">Choose:</label>
                    <select id="remove_bg_img" name='return_form'>
                      <option value="mask">mask</option>
                      <option value="whiteBK">whiteBK</option>
                    </select><br><br>
                    <input type="submit">
                  </form><br>
                  <p>NOTE:- <br>
                      mask: Returns a single channel mask.<br>
                      whiteBK: Return to white background image.</p>
                </div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </div>
  </section>


<section class="simple-cta">
    <div class="container">
      <div class="row">
        <div class="col-lg-5">
          <h4>For <em>Help</em> and <strong>Support</strong> Contact us
!</h4>
        </div>
        <div class="col-lg-7">
          <div class="buttons">
            <div class="green-button">
              <a href="#">Discover More</a>
            </div>
            <div class="orange-button">
              <a href="#">Contact Us</a>
            </div>
          </div>
        </div>
      </div>
    </div>
  </section>
  <footer>
    <div class="container">
      <div class="row">
        <div class="col-lg-12">
```

```
          <p>Copyright @The-Achievers All Rights Reserved.

        </div>
      </div>
    </div>
  </footer>

    <script src="static/vendor/jquery/jquery.min.js"></script>
    <script
src="static/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

    <script src="static/assets/js/isotope.min.js"></script>
    <script src="static/assets/js/owl-carousel.js"></script>

    <script src="static/assets/js/tabs.js"></script>
    <script src="static/assets/js/swiper.js"></script>
    <script src="static/assets/js/custom.js"></script>
    <script>
        var interleaveOffset = 0.5;

      var swiperOptions = {
        loop: true,
        speed: 1000,
        grabCursor: true,
        watchSlidesProgress: true,
        mousewheelControl: true,
        keyboardControl: true,
        navigation: {
          nextEl: ".swiper-button-next",
          prevEl: ".swiper-button-prev"
        },
        on: {
          progress: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              var slideProgress = swiper.slides[i].progress;
              var innerOffset = swiper.width * interleaveOffset;
              var innerTranslate = slideProgress * innerOffset;
              swiper.slides[i].querySelector(".slide-
inner").style.transform =
                "translate3d(" + innerTranslate + "px, 0, 0)";
            }
          },
          touchStart: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = "";
            }
```

```
          },
          setTransition: function(speed) {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = speed + "ms";
              swiper.slides[i].querySelector(".slide-
inner").style.transition =
                  speed + "ms";
            }
          }
        }
      };

      var swiper = new Swiper(".swiper-container", swiperOptions);
    </script>
  </body>
</div>
</html>
```

## beauty_img.html:

```
<!DOCTYPE html>
<html lang="en">
<div class="my-class">

  <head>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;40
0;500;600;700;800;900&display=swap" rel="stylesheet">

    <title>Pixel Perfection: Transforming your photos with our cutting-
edge image editing platform</title>


    <link href="static/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">

    <link rel="stylesheet" href="static/assets/css/fontawesome.css">
    <link rel="stylesheet" href="static/assets/css/templatemo-574-
mexant.css">
    <link rel="stylesheet" href="static/assets/css/owl.css">
```

```
    <link rel="stylesheet" href="static/assets/css/animate.css">
    <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-
bundle.min.css">

  </head>

<body>

  <header class="header-area header-fixed background-header">
      <div class="container">
          <div class="row">
              <div class="col-12">
                  <nav class="main-nav">

                      <ul class="nav">
                          <li class="scroll-to-section"><a href='/',
class="active">Home</a></li>
                          {% if user == 'Loggedin' %}
                          <li class="scroll-to-section"><a
href="/beauty_images">My Images</a></li>
                          {% endif %}
                          <li class="scroll-to-section"><a
href="#about">About</a></li>
                          <li class="has-sub">
                              <a href="javascript:void(0)">IMAGE AI</a>
                              <ul class="sub-menu">
                                <li><a href="/removebg">Remove
Background</a></li>
                                <li><a href="/vehicleremove">Vehicle
Background</a></li>
                                <li><a href="/cartoon_img">Cartoon
yourself</a></li>
                                <li><a href="/beauty_img">AI Skin
Beauty</a></li>

                              </ul>
                          </li>

                          {% if user == 'Loggedin' %}
                          <li><a href="/logout">logout</a></li>
                          {% else %}
                          <li><a href="/login">login</a></li>
                          {% endif %}
                      </ul>
                      <a class='menu-trigger'>
                          <span>Menu</span>
                      </a>
```

```
                </nav>
              </div>
          </div>
      </div>
  </header>


  <section class="main-services">
    <div class="container">
      <div class="row">
        <div class="col-lg-12">
          <div class="service-item">
            <div class="row">
              <div class="col-lg-6">
                <div class="left-image">
                  <img src="{{image_o}}" alt="img after bg
remove"><br><br>

                </div>
              </div>
              <div class="col-lg-6 align-self-center">
                <div class="right-text-content">
                  <i class="fa fa-upload"></i>
                  <h4>Upload Image</h4>
                  <form action="/beauty_img" method="POST"
enctype="multipart/form-data">
                    <input type="file" id="myFile"
name="filename"><br><br>
                    <p>NOTE:- Image format: Only JPG,JPEG,PNG format
Supported. <br>
                      Image size: no more than 3 MB.<br>
                      Image resolution: less than 1280 x 1280
pixels.</p><br>
                    <p>Retouch_degree:-<input type="number" id="number"
name="number"  min="0" max="1.5" step="0.1"></p><br><br>
                    <p>Whitening_degree:-<input type="number" id="number"
name="number1"  min="0" max="1.5" step="0.1"></p><br><br>


                    <input type="submit">
                  </form><br>

                </div>
              </div>
            </div>
          </div>
        </div>

      </div>
```

```
    </div>
  </section>

  <section class="simple-cta">
    <div class="container">
      <div class="row">
        <div class="col-lg-5">
          <h4>For <em>Help</em> and <strong>Support</strong> Contact us
!</h4>
        </div>
        <div class="col-lg-7">
          <div class="buttons">
            <div class="green-button">
              <a href="#">Discover More</a>
            </div>
            <div class="orange-button">
              <a href="#">Contact Us</a>
            </div>
          </div>
        </div>
      </div>
    </div>
  </section>


<footer>
  <div class="container">
    <div class="row">
      <div class="col-lg-12">
        <p>Copyright @The-Achievers All Rights Reserved.

      </div>
    </div>
  </div>
</footer>

    <script src="static/vendor/jquery/jquery.min.js"></script>
    <script
src="static/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

    <script src="static/assets/js/isotope.min.js"></script>
    <script src="static/assets/js/owl-carousel.js"></script>

    <script src="static/assets/js/tabs.js"></script>
    <script src="static/assets/js/swiper.js"></script>
    <script src="static/assets/js/custom.js"></script>
    <script>
        var interleaveOffset = 0.5;
```

```
      var swiperOptions = {
        loop: true,
        speed: 1000,
        grabCursor: true,
        watchSlidesProgress: true,
        mousewheelControl: true,
        keyboardControl: true,
        navigation: {
          nextEl: ".swiper-button-next",
          prevEl: ".swiper-button-prev"
        },
        on: {
          progress: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              var slideProgress = swiper.slides[i].progress;
              var innerOffset = swiper.width * interleaveOffset;
              var innerTranslate = slideProgress * innerOffset;
              swiper.slides[i].querySelector(".slide-
inner").style.transform =
                "translate3d(" + innerTranslate + "px, 0, 0)";
            }
          },
          touchStart: function() {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = "";
            }
          },
          setTransition: function(speed) {
            var swiper = this;
            for (var i = 0; i < swiper.slides.length; i++) {
              swiper.slides[i].style.transition = speed + "ms";
              swiper.slides[i].querySelector(".slide-
inner").style.transition =
                speed + "ms";
            }
          }
        }
      };

      var swiper = new Swiper(".swiper-container", swiperOptions);
    </script>
  </body>
</div>
</html>
```

## cartoon_img.html:

```
<!DOCTYPE html>
<html lang="en">
<div class="my-class">
  <head>

    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@100;200;300;40
0;500;600;700;800;900&display=swap" rel="stylesheet">

    <title>Pixel Perfection: Transforming your photos with our cutting-
edge image editing platform</title>

    <link href="static/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">


    <link rel="stylesheet" href="static/assets/css/fontawesome.css">
    <link rel="stylesheet" href="static/assets/css/templatemo-574-
mexant.css">
    <link rel="stylesheet" href="static/assets/css/owl.css">
    <link rel="stylesheet" href="static/assets/css/animate.css">
    <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-
bundle.min.css">

  </head>

<body>

  <header class="header-area header-fixed background-header">
      <div class="container">
          <div class="row">
              <div class="col-12">
                  <nav class="main-nav">

                      <ul class="nav">
                          <li class="scroll-to-section"><a href='/',
class="active">Home</a></li>

                          {% if user == 'Loggedin' %}
                          <li class="scroll-to-section"><a
href="/cartoon_images">My Images</a></li>
```

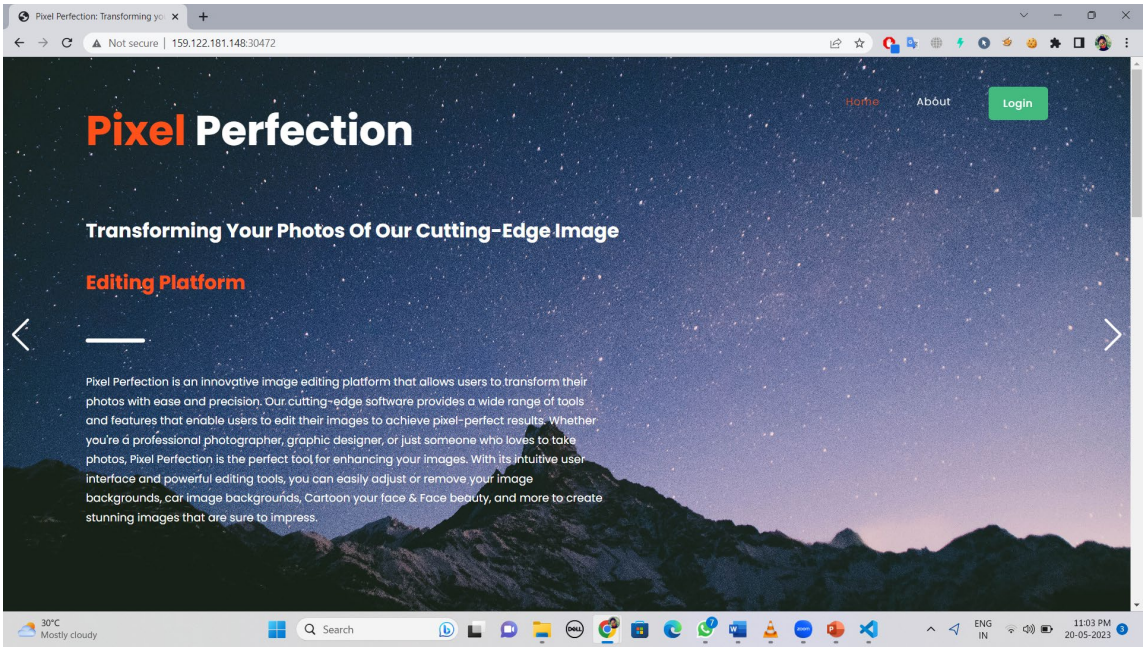
```
                        {% endif %}
                        <li class="scroll-to-section"><a
href="#about">About</a></li>
                        <li class="has-sub">
                            <a href="javascript:void(0)">IMAGE AI</a>
                            <ul class="sub-menu">
                              <li><a href="/removebg">Remove
Background</a></li>
                              <li><a href="/vehicleremove">Vehicl
Background</a></li>
                              <li><a href="/cartoon_img">Cartoon
yourself</a></li>
                              <li><a href="/beauty_img">AI Skin
Beauty</a></li>

                            </ul>
                        </li>

                        {% if user == 'Loggedin' %}
                        <li><a href="/logout">logout</a></li>
                        {% else %}
                        <li><a href="/login">login</a></li>
                        {% endif %}
                    </ul>
                    <a class='menu-trigger'>
                        <span>Menu</span>
                    </a>

                </nav>
            </div>
        </div>
    </div>
  </header>


  <section class="main-services">
    <div class="container">
      <div class="row">
        <div class="col-lg-12">
          <div class="service-item">
            <div class="row">
              <div class="col-lg-6">
                <div class="left-image">
                  <img src="{{image_o}}" alt="img after bg
remove"><br><br>
                  <img src="{{image_b64}}" alt="your image ">
                </div>
              </div>
              <div class="col-lg-6 align-self-center">
```

```
                <div class="right-text-content">
                  <i class="fa fa-upload"></i>
                  <h4>Upload Image</h4>
                  <form action="/cartoon_img" method="POST"
enctype="multipart/form-data">
                    <input type="file" id="myFile"
name="filename"><br><br>
                    <p>NOTE:- Image to be processed.
                        Image format: JPG, JPEG, PNG, BMP.
                        Image size: no more than 3 MB.<br>
                        Image resolution: less than 1280 x 1280
pixels.</p><br>
                    <label for="return_form">Choose:</label>
                    <select id="image_type" name='return_form'>
                      <option value="anime">anime</option>
                      <option value="pixar_plus">pixar plus</option>
                      <option value="3d_cartoon">3d cartoon</option>
                      <option value="angel">angel</option>

                      <option value="handdrawn">handdrawn</option>
                      <option value="demon">demon</option>
                    </select><br><br>
                    <input type="submit">
                  </form><br>

                </div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </section>

    <section class="simple-cta">
      <div class="container">
        <div class="row">
          <div class="col-lg-5">
            <h4>For <em>Help</em> and <strong>Support</strong> Contact us
!</h4>
          </div>
          <div class="col-lg-7">
            <div class="buttons">
              <div class="green-button">
                <a href="#">Discover More</a>
              </div>
              <div class="orange-button">
                <a href="#">Contact Us</a>
```

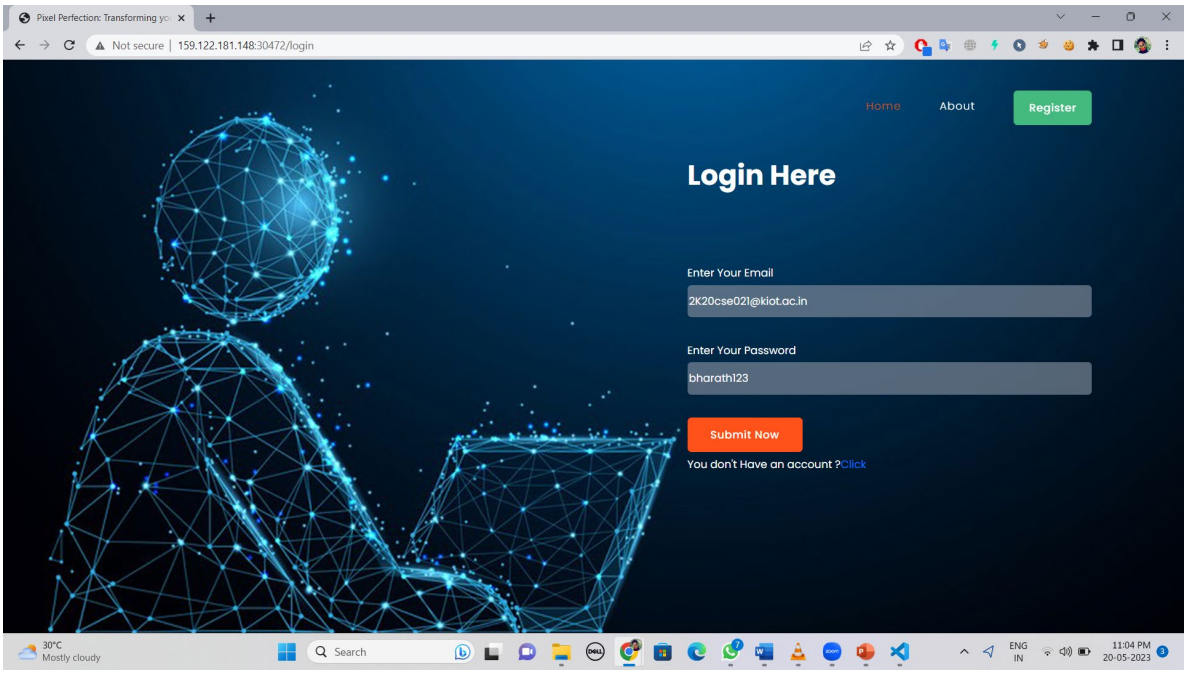
```
          </div>
        </div>
      </div>
    </div>
  </div>
</section>



<footer>
  <div class="container">
    <div class="row">
      <div class="col-lg-12">
        <p>Copyright @The-Achievers All Rights Reserved.

      </div>
    </div>
  </div>
</footer>

  <script src="static/vendor/jquery/jquery.min.js"></script>
  <script
src="static/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

  <script src="static/assets/js/isotope.min.js"></script>
  <script src="static/assets/js/owl-carousel.js"></script>

  <script src="static/assets/js/tabs.js"></script>
  <script src="static/assets/js/swiper.js"></script>
  <script src="static/assets/js/custom.js"></script>
  <script>
      var interleaveOffset = 0.5;

    var swiperOptions = {
      loop: true,
      speed: 1000,
      grabCursor: true,
      watchSlidesProgress: true,
      mousewheelControl: true,
      keyboardControl: true,
      navigation: {
        nextEl: ".swiper-button-next",
        prevEl: ".swiper-button-prev"
      },
      on: {
        progress: function() {
          var swiper = this;
          for (var i = 0; i < swiper.slides.length; i++) {
            var slideProgress = swiper.slides[i].progress;
```

```
            var innerOffset = swiper.width * interleaveOffset;
            var innerTranslate = slideProgress * innerOffset;
            swiper.slides[i].querySelector(".slide-
inner").style.transform =
              "translate3d(" + innerTranslate + "px, 0, 0)";
          }
        },
        touchStart: function() {
          var swiper = this;
          for (var i = 0; i < swiper.slides.length; i++) {
            swiper.slides[i].style.transition = "";
          }
        },
        setTransition: function(speed) {
          var swiper = this;
          for (var i = 0; i < swiper.slides.length; i++) {
            swiper.slides[i].style.transition = speed + "ms";
            swiper.slides[i].querySelector(".slide-
inner").style.transition =
              speed + "ms";
          }
        }
      }
    };

    var swiper = new Swiper(".swiper-container", swiperOptions);
  </script>
 </body>
</div>
</html>
```

## 11.2 SCREENSHOTS




**User Interface Module**




**User Registration and authentication Module**

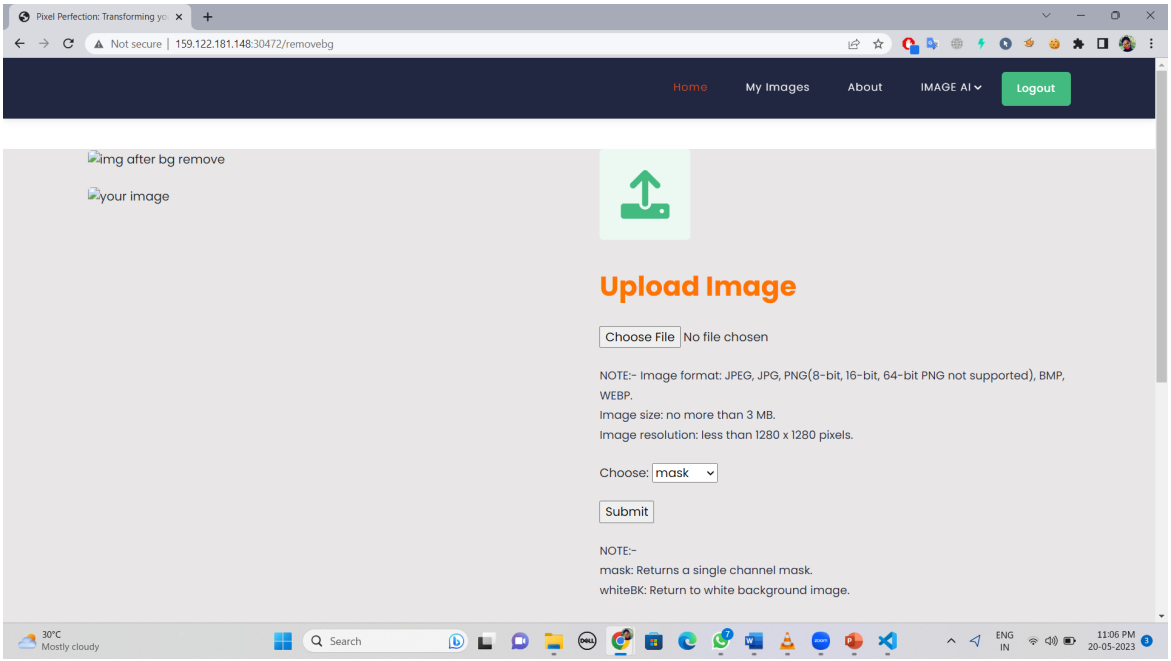
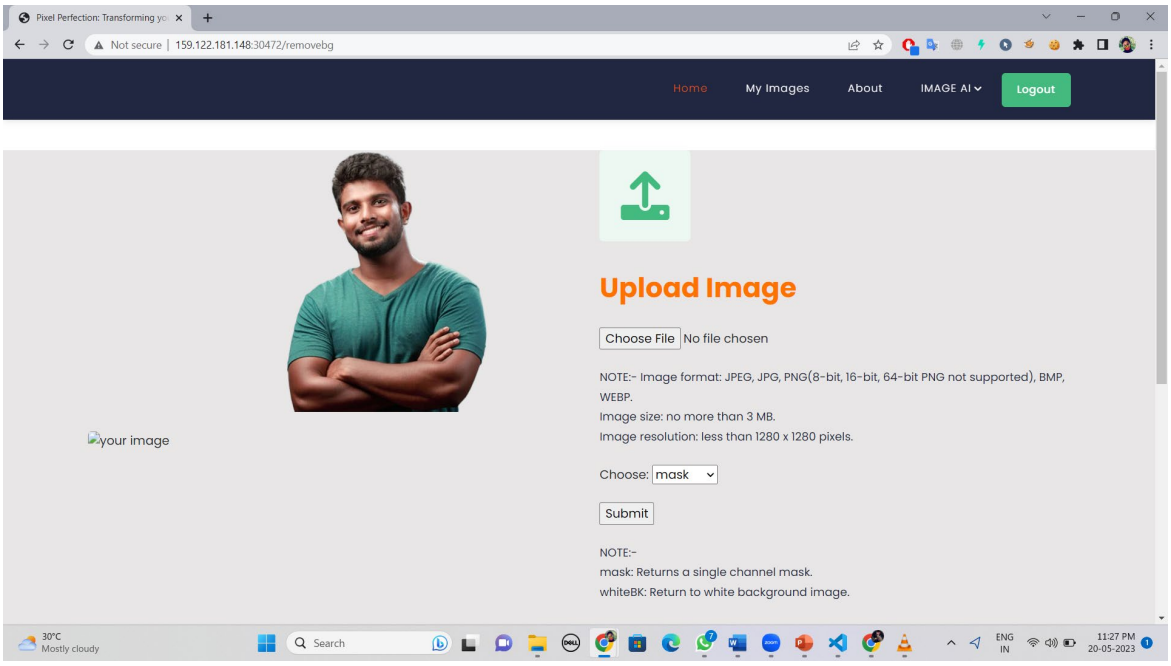
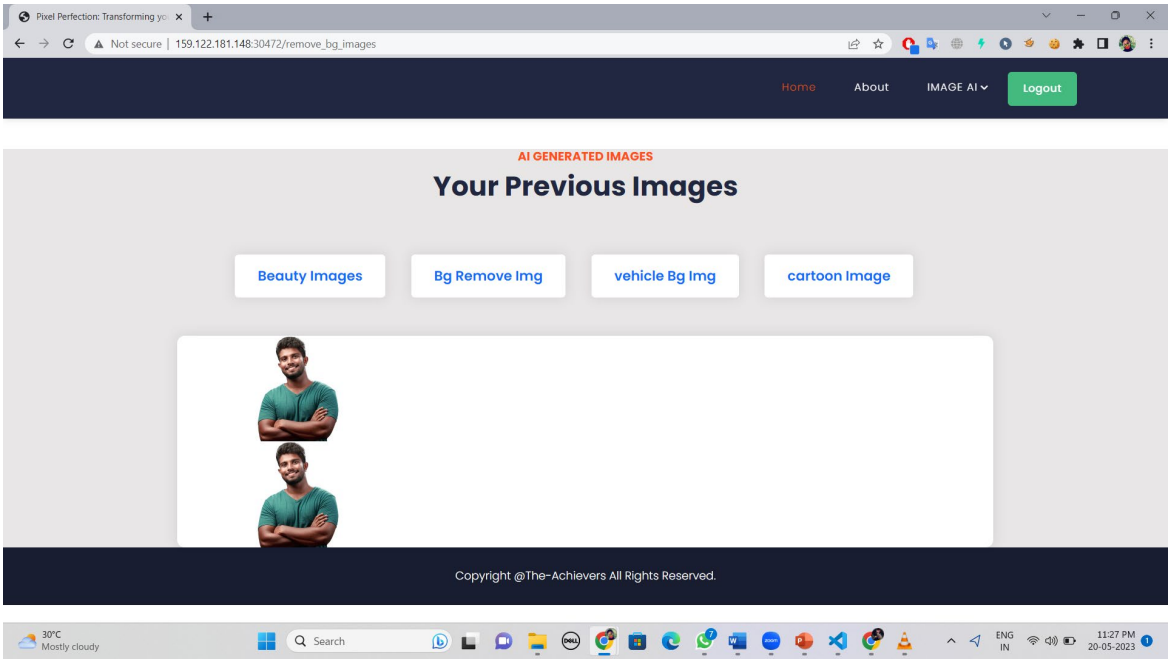



**Image Upload and Editing Module**




**AI-Powered Background Remove Module**




**View and Save Module**

## 11.3 GITHUB & PROJECT VIDEO DEMO LINK

**GITHUB LINK:**

https://github.com/naanmudhalvan-SI/IBM--13556-1682326385

**PROJECT VIDEO DEMO LINK:**

https://www.youtube.com/watch?v=NHZjcwoqmu4

**DEPLOYMENT LINK:** http://159.122.181.148:30472/

# REFERENCES

## REFERENCES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