Human SkinTone Detection
Batch B3 (March-April)
Documentation/ Instruction Manual

#About the Project:
====================

The project is to find out the skin tone of a person and then classify them
into different categories like 'fair', 'mild', or 'dark.

The user can upload the images which are to be processed either by uploading a
file from the local machine, or an online URL of the image.

The image as input must cover most part of the image with face for improved
accuracy. Also, the image URL should be freely accessible online for the program
to get the image from it.

#Features:
==========

Detects SkinTone of various types, like fair, mild and dark.
User can input either by Uploading a file locally or upload the image link.

#What's in the Project:
========================

Web Development:

        Frontend: HTML
                    CSS
                    Bootstrap
                    JavaScript

        Backend: Python Django

Machine Learning:

        Algorithms Used:

                kmeans clustering algorithm

```
#Requied Installations:
========================

Python 3     https://www.python.org/

Django 3     https://www.djangoproject.com/

Following packages are required to be installed before running the project:
```

Package	Version Used In Project
Django	3.2.2
Flask	2.0.0
imutils	0.5.4
matplotlib	3.4.2
numpy	1.20.3
opencv-python	4.5.2.52
pandas	1.2.4
Pillow	8.2.0
requests	2.25.1
sklearn	0.0
xlrd	2.0.1

```
For installing these packages, open Command Prompt as Administrator and then
type the following command:
        pip install <name_of_package>



#Running the Project:
=====================

Copy the path of your project directory
Open Command Prompt
Type the following and hit Enter:
        cd <path of the project you copied>
Then run the project by:
        python manage.py runserver
Copy the URL which is displayed and paste in your web browser.



#Common Issues:
===============

ModuleNotFoundError: No module named 'xyz'.

        Solution:
        Install that missing package using pip install <name_of_package>

You have x unapplied migration(s). Your project may not work properly until you
apply the migrations for app(s): 'abc', 'def', 'ghi'.

        Solution:
        Go inside the project directory using cd <path of the project> command
        and then write the following commands:
                python manage.py makemigrations
                python manage.py migrate
```