GLA UNIVERSITY MATHURA

CARTOONIFY

LETS CARTOON THE WORLD !!

SUBMITTED TO :-

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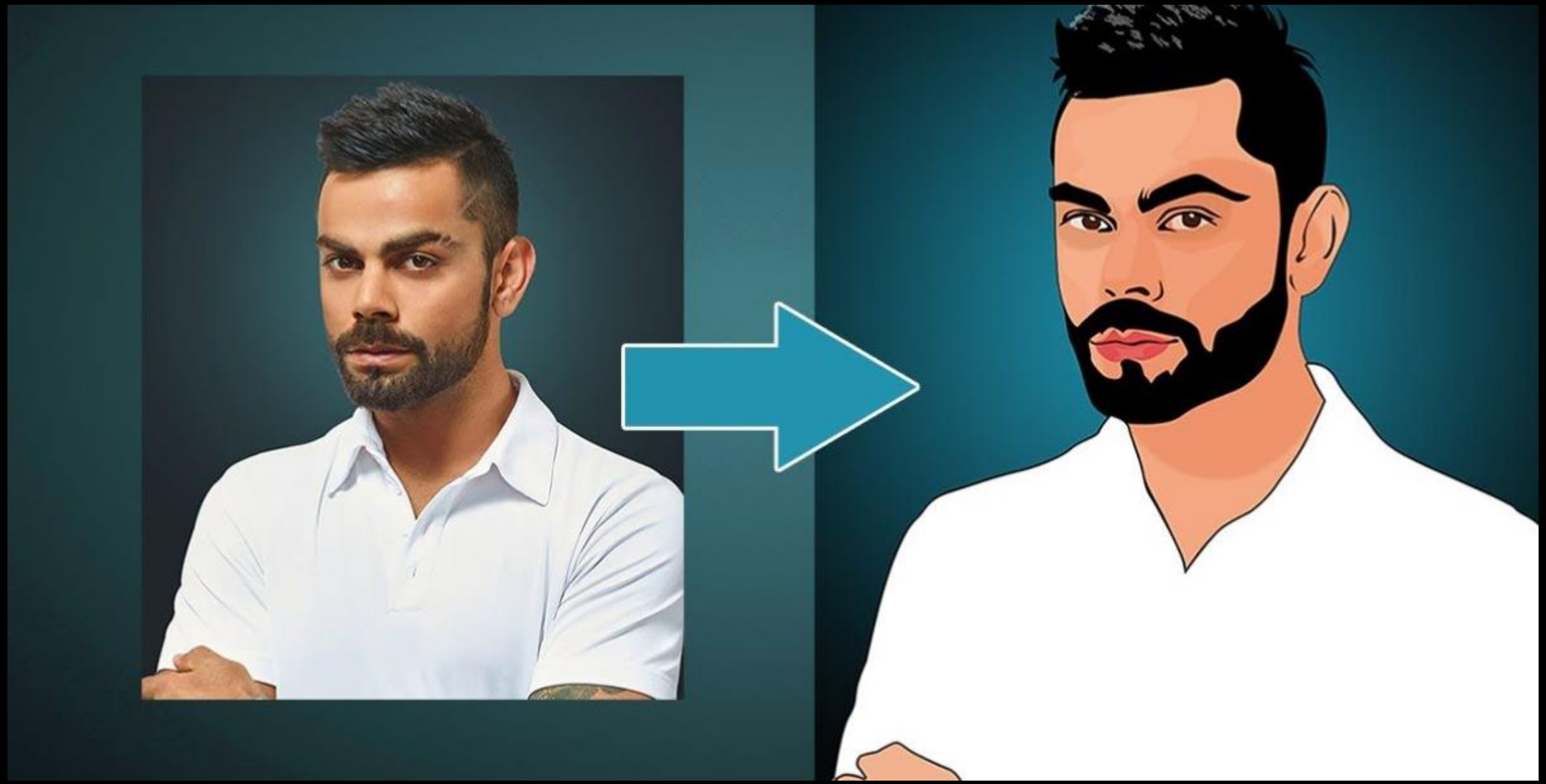


ISN'T IT COOL ??

INTRODUCTION

Animation pictures assume basic parts in our regular day to day existences particularly in diversion, training, and promotion, that become an inexorably escalated research in the field of media and PC designs. The naturally animation object extraction is exceptionally helpful in numerous applications; one of the most significantly is the animation pictures recovery, where the client for animation pictures recovery framework focuses to get comparable pictures to question picture from information base in character.

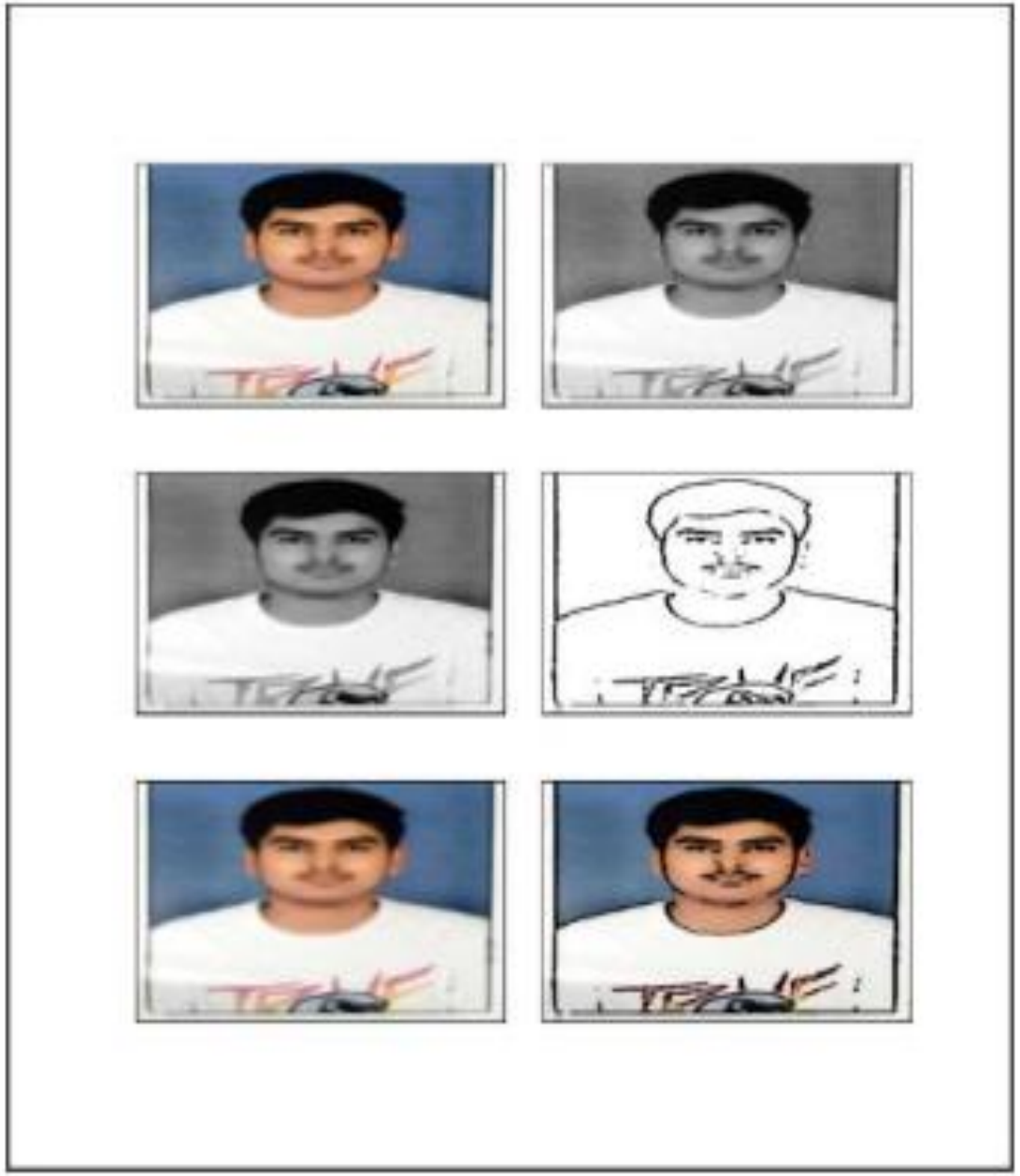
PROJECT DESCRIPTION

Image to Cartoon Python OpenCV Machine Learning . This Project web app project you can directly select image then you can convert any image to cartoon . It's very interesting project .

WORKING

To convert an image to a cartoon, multiple transformations are done. Firstly, an image is converted to a Grayscale image. Then, the Grayscale image is smoothened, and we try to extract the edges in the image. Finally, we form a color image and mask it with edges. This creates a beautiful cartoon image with edges and lightened color of the original image.

PLOTTING ALL THE TRANSITIONS TOGETHER



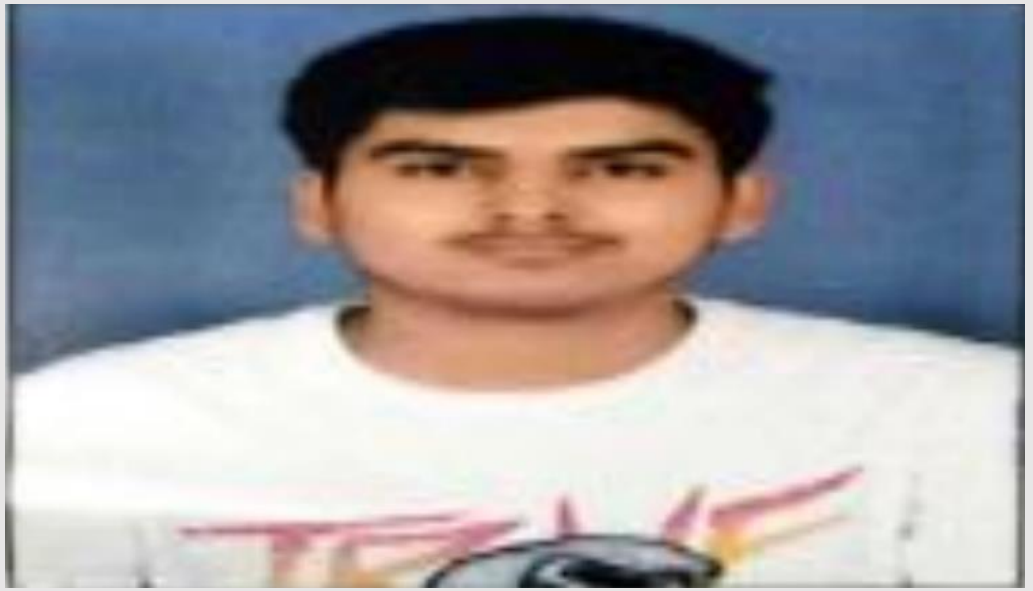
MACHINE LEARNING

Machine learning (ML) is a field of inquiry devoted to understanding and building methods that 'learn', that is, methods that leverage data to improve performance on some set of tasks. It is seen as a part of artificial intelligence.

OpenCV

- OpenCV is an open-source library in python that is used mainly for computer vision tasks in the areas of machine learning and artificial intelligence. Nowadays, OpenCV is playing a major role in the field of technology. Using OpenCV we can process images and videos for some tasks like object detection, face detection, object tracking, and all.

THE ABOVE IMAGE IS TRANSFORMED TO THE BELOW IMAGE VIA ALL THE STEPS WE MENTIONED



Languages And Libraries

- Python: We use python as a programming language for building the application.
- cv2: We use cv2 for image processing.
- Numpy: Mainly NumPy is used for dealing with arrays. Here the imagesthat we use are stored in the form of arrays. So for that, we use NumPy.
- easygui: easygui is a module used for GUI programming in python. In our application easygui is used to open the file box to upload images from the local system.
- Imageio: Imageio is a python library that reads and writes the images.
- Matplotlib: Matplotlib is used for visualization purposes. Here we plot the images using matplotlib.
- OS: Here in our application os is used for dealing with paths like reading images from the path and saving the image to the path.
- Tkinter : Tkinter is a standard Graphical User Interface(GUI) package.

HARDWARE REQUIREMENTS

- 512 MB Ram Window 10
- Intel i3 processor

REFERENCES

BOOKS:-

- Hands-on ML with Scikit-Learn, Keras & TensorFlow
- Machine Learning for Absolute Beginners: A Plain English Introduction.

Websites:

- www.geeksforgeeks.org
- www.google.com
- www.projectdeveloper.com
- www.pythonprojects.com

Faculty Mentor

- MR. ABHISHEK KUMAR TIWARI

GitHub Repository link

AND

Google drive Link

https://github.com/aryangupta777/cartoonify.git

https://drive.google.com/drive/folders/15q45izQZbS8zYUtOu7C1QofqSpGKL2la?usp=sharing

Conclusion

- Finally, we will get the output image as shown above. It contains all the 6 transitions of the image. And the final image is the cartoon image. I hope you have enjoyed this application. This is the “Cartoon Version” of the image. Now using this application, you can create your cartoon image. This is Thrilling!!!!!!

Overall in this article, we have seen

- How to build an application to convert an image into its cartoon form.
- How to use Tkinter to provide GUI.
- How to use easygui
- Working on the application

THANK YOU