



Re:Draw OpenCV

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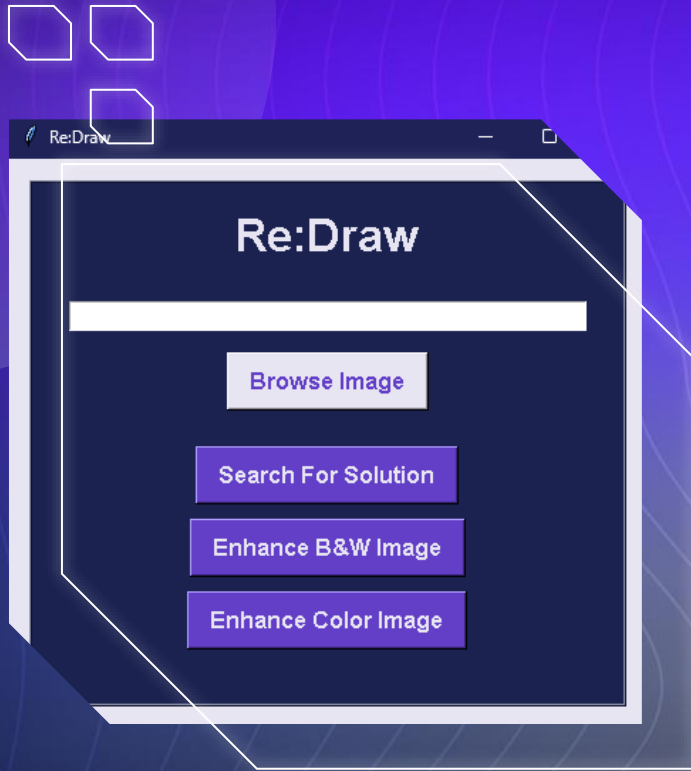
Applications



Introduction

Re:Draw is an OpenCV project based to convert handwritten notes or questions into text. It enhances low-quality images, removes noise, and making it easier for students and educators to digitize and organize material.





GUI

The app includes a clean GUI built with Tkinter.

The interface is responsive and includes real-time feedback and file previews.

To run the app, open CMD and run the "main.py" file



Extract Text

This function allows the user to extract written text from an image of a question or similar. The user selects an image file, and the system processes it using OCR. The extracted text is then directly searched on google to make it easy to find the solution. The extracted text has enough similar keywords so the user can find the exact question online.

can you convert the following
But-1-ene to 1-iodobutane
Benzene to acetophenone
Ethanol to propanenitrile

Extracted Text

How can you convert the following
y fi But1ene to Liodobutane woe Gi
Benzene to acetophenone ii
Ethanol to propanenitrile



Enhance Image

This function improves the quality of an image based on the user's choice of enhancement method. After processing, the enhanced image is saved, and the file is opened for the user to review. This tool is ideal for improving image clarity and quality, making it easier to read or analyze.

Enhance Image (B&W)

Before

Before processing

After

After processing

Class Time Table								
Cambridge School								
Id	1	2	3	4	5	6	7	8
	08:20 AM-08:55 AM	08:55 AM-09:30 AM	09:30 AM-10:05 AM	10:05 AM-10:40 AM	10:40 AM-11:15 AM	11:40 AM-12:15 PM	12:15 PM-12:50 PM	12:50 PM-01:25 PM
Monday	C.Sc.,Ph Ed Preeti_K,SA NJ	Phy Suvendu_G	JHPE_ABC	Maths Rohit_D	Maths Rohit_D	Phy LAB,Chem LAB Suvendu_G, Mamta_R	Phy LAB,Chem LAB Suvendu_G, Mamta_R	ENG Bharti_S
Tuesday	ENG Bharti_S	Maths Rohit_D	Phy Suvendu_G	Chem Mamta_R	Chem Mamta_R	C.Sc.,Ph Ed Preeti_K,SA NJ	C.Sc.,Ph Ed Preeti_K,SA NJ	Phy Suvendu_G
Wednesday	CT Rohit_D	Chem Mamta_R	ADM_XII_AB C	Maths Rohit_D	ENG Bharti_S	Chem Mamta_R	Lib,Logic Milind_Kr,Ka MA	C.Sc.,Ph Ed Preeti_K,SA NJ
Thursday	Maths Rohit_D	C.Sc.,Ph Ed Preeti_K,SA NJ	C.Sc.,Ph Ed Preeti_K,SA NJ	Phy LAB,Chem LAB Suvendu_G, Mamta_R	Phy LAB,Chem LAB Suvendu_G, Mamta_R	Chem Mamta_R	Phy Suvendu_G	Maths Rohit_D
Friday	CT Rohit_D	Phy Suvendu_G	Phy Suvendu_G	Chem Mamta_R	ENG Bharti_S	Maths Rohit_D	GST Sunetra_B	ENG Bharti_S

15 Time: 11:57:50

Class Time Table								
Cambridge School								
Id	1	2	3	4	5	6	7	8
	08:20 AM-08:55 AM	08:55 AM-09:30 AM	09:30 AM-10:05 AM	10:05 AM-10:40 AM	10:40 AM-11:15 AM	11:40 AM-12:15 PM	12:15 PM-12:50 PM	12:50 PM-01:25 PM
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Tuesday	ENG Bharti_S	Maths Rohit_D	Phy Suvendu_G	Chem Mamta_R	Chem Mamta_R	C.Sc.,Ph Ed Preeti_K,SA NJ	C.Sc.,Ph Ed Preeti_K,SA NJ	Phy Suvendu_G
Wednesday	CT Rohit_D	Chem Mamta_R	ADM_XII_AB C	Maths Rohit_D	ENG Bharti_S	Chem Mamta_R	Lib,Logic Milind_Kr,Ka MA	C.Sc.,Ph Ed Preeti_K,SA NJ
Thursday	Maths Rohit_D	C.Sc.,Ph Ed Preeti_K,SA NJ	C.Sc.,Ph Ed Preeti_K,SA NJ	Phy LAB,Chem LAB Suvendu_G, Mamta_R	Phy LAB,Chem LAB Suvendu_G, Mamta_R	Chem Mamta_R	Phy Suvendu_G	Maths Rohit_D
Friday	CT Rohit_D	Phy Suvendu_G	Phy Suvendu_G	Chem Mamta_R	ENG Bharti_S	Maths Rohit_D	GST Sunetra_B	ENG Bharti_S

15 Time: 11:57:50

Enhance Image (Color)

Before

Before processing

Q. If A and B are symm matrix show that $AB - BA$ is skew symm

Given, $A^T = A$ To show, $(AB - BA)$ is skew symm
 $B^T = B \Rightarrow (AB - BA)^T = -(AB - BA)$

$$\begin{aligned} &\rightarrow (AB - BA)^T \\ &= (AB)^T - (BA)^T \\ &= B^T A^T - A^T B^T \\ &= BA - AB = -(AB - BA) \end{aligned}$$

After

After processing

Q. If A and B are symm matrix show that, $AB - BA$ is skew symm

Given, $A^T = A$ To show, $(AB - BA)$ is skew symm.
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$$\begin{aligned} &\rightarrow (AB - BA)^T \\ &= (AB)^T - (BA)^T \\ &= B^T A^T - A^T B^T \\ &= BA - AB = -(AB - BA) \end{aligned}$$

Applications Of Re:Draw



Enhance Image

Can be used to improve quality of notes, diagrams and images.



Extract Text

May be used to easily extract text from questions in order to find solutions online.



Thank You

I appreciate your time, attention
and I hope Re:Draw inspires
better ways to digitize and
enhance digital content.