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▼ PYTHON PROGRAMS
Task-2PixelManipulationforIMG.py > download_decrypted

79
80 def en_fun(x):
81     global image_encrypted, key
82     image_input = cv2.imread(x, 0)
83     if image_input is not None:
84         (x1, y) = image_input.shape
85         image_input = image_input.astype(float) / 255.0
86         mu, sigma = 0, 0.1
87         key = np.random.normal(mu, sigma, (x1, y)) + np.finfo(float).eps
88         image_encrypted = image_input / key
89         cv2.imwrite('image_encrypted.jpg', image_encrypted * 255)
90         img = Image.open('image_encrypted.jpg')
91         img = ImageTk.PhotoImage(img)
92         panelB.configure(image=img)
93         panelB.image = img
94         mbox.showinfo("Encrypt Status", "Image Encrypted successfully.")
95         filename = filedialog.asksaveasfile(mode='w', defaultextension=".jpg", filetypes=[("JPEG files", "*.jpg")])
96         if filename:
97             with open(filename.name, 'wb') as f:
98                 f.write(open('image_encrypted.jpg', 'rb').read())
99             mbox.showinfo("Success", "Encrypted image saved successfully!")
100         else:
101             mbox.showwarning("Warning", "Failed to read image.")
102
103 def de_fun():
104     global image_encrypted, key
105     if image_encrypted is not None and key is not None:
106         image_output = image_encrypted * key
107         image_output *= 255.0
108         cv2.imwrite('image_output.jpg', image_output)
109         imgd = Image.open('image_output.jpg')
110         imgd = ImageTk.PhotoImage(imgd)
111         panelB.configure(image=imgd)
112         panelB.image = imgd
113         mbox.showinfo("Decrypt Status", "Image decrypted successfully.")
114         filename = filedialog.asksaveasfile(mode='w', defaultextension=".jpg", filetypes=[("JPEG files", "*.jpg")])
```



