



main ▾

WORKSHOP-3-Canny-Edge-Detection / README.md



Aankarsh Update README.md

2f6d022 · now



70 lines (56 loc) · 1.62 KB

Preview

Code

Blame

Raw



Canny Edge Detection

Name: AANKARSH J

Reg NO :212223233001

Program

Canny Edge Detection in Python

```
import cv2
import matplotlib.pyplot as plt
```



Step 1: Read an image (replace with your own)

```
image_path = "color.jpg" # You can use any sample image
image = cv2.imread(image_path)
```



```
if image is None:
    raise FileNotFoundError("Image not found! Please check your path or filename.")
```

Step 2: Convert to grayscale

```
gray = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
```



Step 3: Apply Gaussian Blur to remove noise

```
blurred = cv2.GaussianBlur(gray, (5, 5), 1.4)
```



Step 4: Apply Canny Edge Detection with varying thresholds

```
edges_low = cv2.Canny(blurred, 50, 100)    # Detects more edges
(including weak)
edges_medium = cv2.Canny(blurred, 100, 200) # Balanced detection
edges_high = cv2.Canny(blurred, 150, 250)   # Detects fewer, stronger
edges
```



Step 5: Display results

```
plt.figure(figsize=(14, 8))

plt.subplot(2, 2, 1)
plt.imshow(cv2.cvtColor(image, cv2.COLOR_BGR2RGB))
plt.title("Original Image")
plt.axis("off")

plt.subplot(2, 2, 2)
plt.imshow(edges_low, cmap='gray')
plt.title("Edges (Thresholds: 50-100)")
plt.axis("off")

plt.subplot(2, 2, 3)
plt.imshow(edges_medium, cmap='gray')
plt.title("Edges (Thresholds: 100-200)")
plt.axis("off")

plt.subplot(2, 2, 4)
plt.imshow(edges_high, cmap='gray')
```



```
plt.title("Edges (Thresholds: 150-250)")
plt.axis("off")

plt.tight_layout()
plt.show()
```

Output

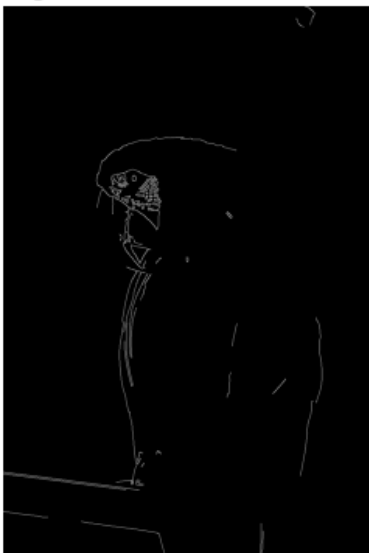
Original Image



Edges (Thresholds: 50-100)



Edges (Thresholds: 100-200)



Edges (Thresholds: 150-250)



RESULT

Thus the result have been executed successfully.