



Aankarsh / WORKSHOP-3-Canny-Edge-Detection



Code

Issues

Pull requests

Actions

Projects

Wiki

Security



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

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## 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

---

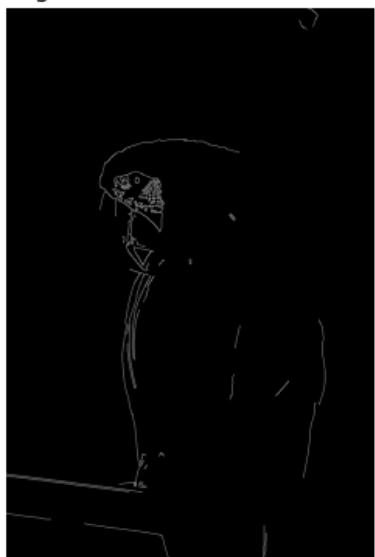
Original Image



Edges (Thresholds: 50-100)



Edges (Thresholds: 100-200)



Edges (Thresholds: 150-250)



# RESULT

---

Thus the result have been executed successfully.