import cv2  
import numpy as np  
  
image = cv2.imread('coins.jpg', cv2.IMREAD\_GRAYSCALE)  
if image is None:  
 raise ValueError("Image not found. Please check the file path.")  
  
blurred\_image = cv2.GaussianBlur(image, (5, 5), 0)  
  
sobel\_x = cv2.Sobel(blurred\_image, cv2.CV\_64F, 1, 0, ksize=5)  
sobel\_y = cv2.Sobel(blurred\_image, cv2.CV\_64F, 0, 1, ksize=5)  
  
gradient\_magnitude = cv2.magnitude(sobel\_x, sobel\_y)  
gradient\_magnitude = cv2.normalize(gradient\_magnitude, None, 0, 255, cv2.NORM\_MINMAX).astype(np.uint8)  
  
\_, edges = cv2.threshold(gradient\_magnitude, 50, 255, cv2.THRESH\_BINARY)  
dilated\_edges = cv2.dilate(edges, None, iterations=1)  
  
cv2.imshow('Original Image', image)  
cv2.imshow('Blurred Image', blurred\_image)  
cv2.imshow('Gradient Magnitude', gradient\_magnitude)  
cv2.imshow('Edges', edges)  
cv2.imshow('Dilated Edges', dilated\_edges)  
cv2.waitKey(0)  
cv2.destroyAllWindows()