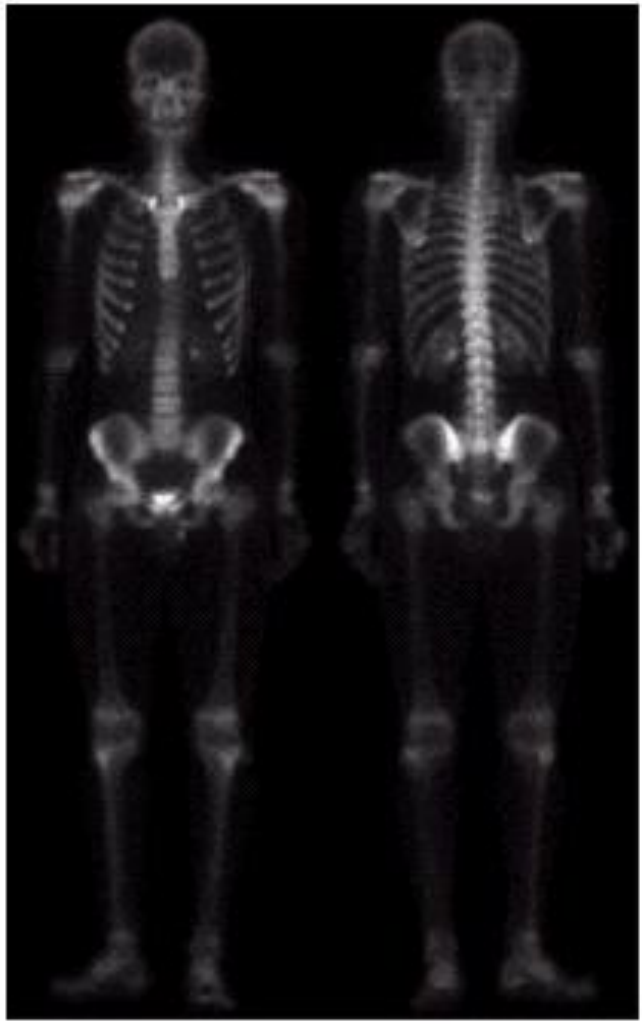
PROJECT 2

1. Combining Spatial Enhancement Methods

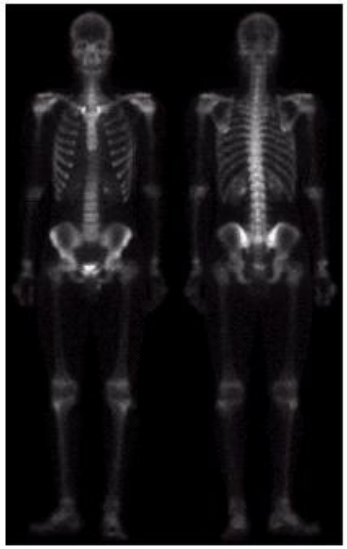
Successful image enhancement is typically not achieved using a single operation

Rather we combine a range of techniques in order to achieve a final result

This example will focus on enhancing the bone scan to the right

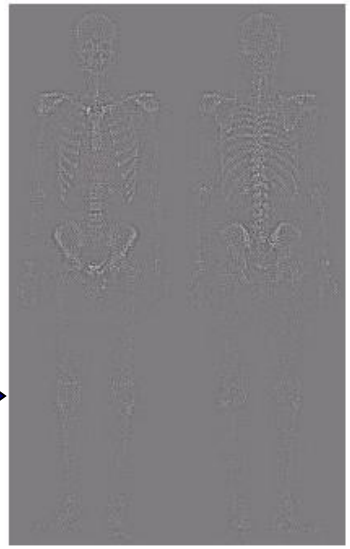


Combining Spatial Enhancement Methods (cont…)



(a)

Laplacian filter of bone scan (a)

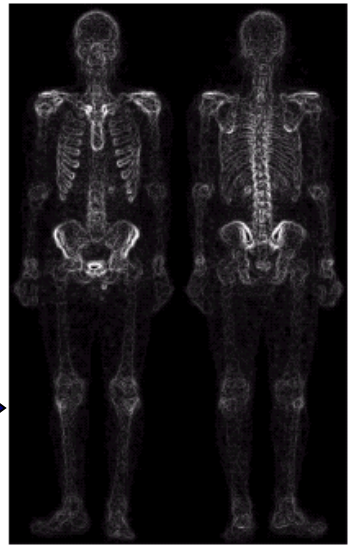


(b)

Sharpened version of bone scan achieved by subtracting (a) and (b)

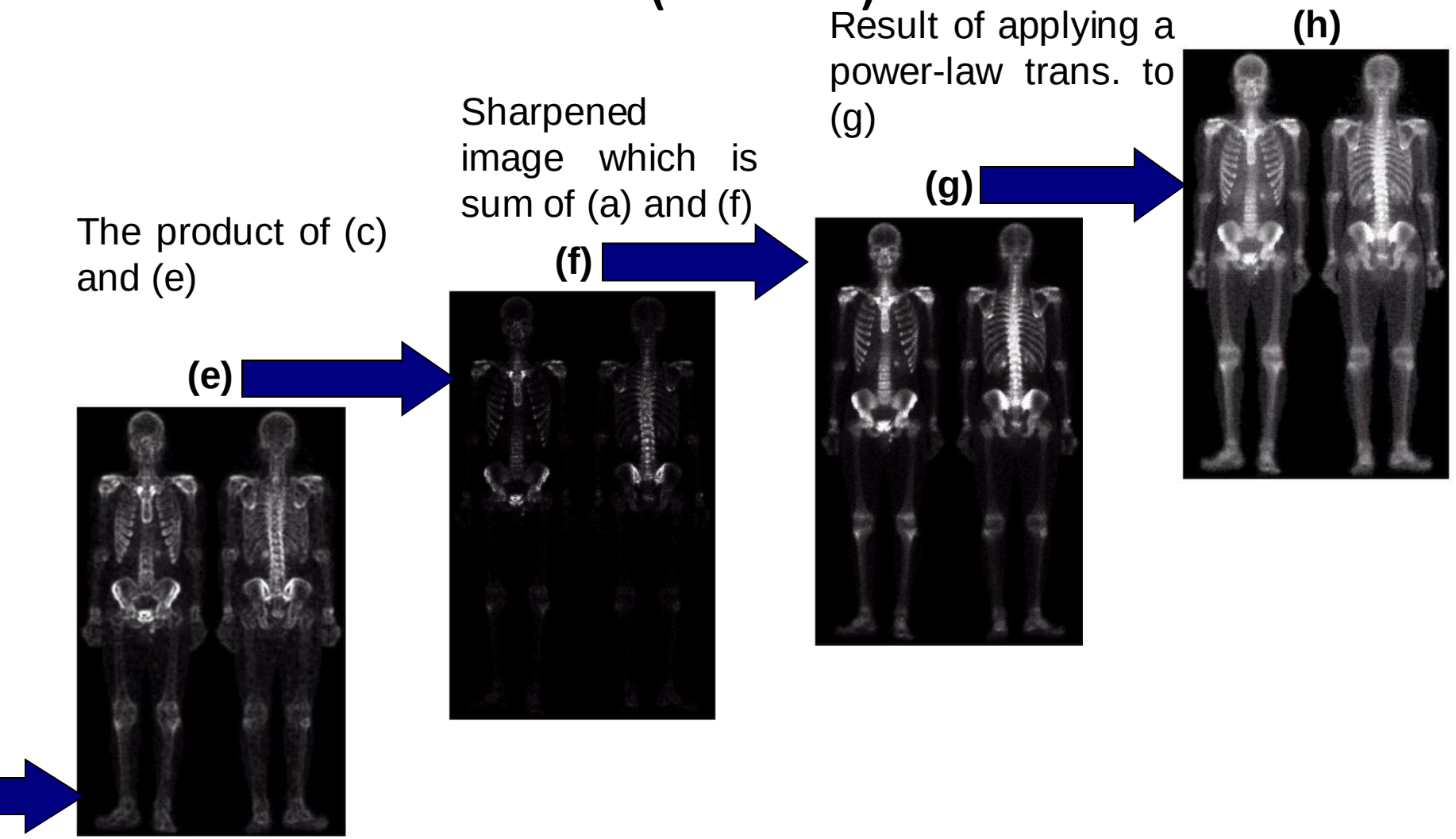
(c)

Sobel filter of bone scan (c)



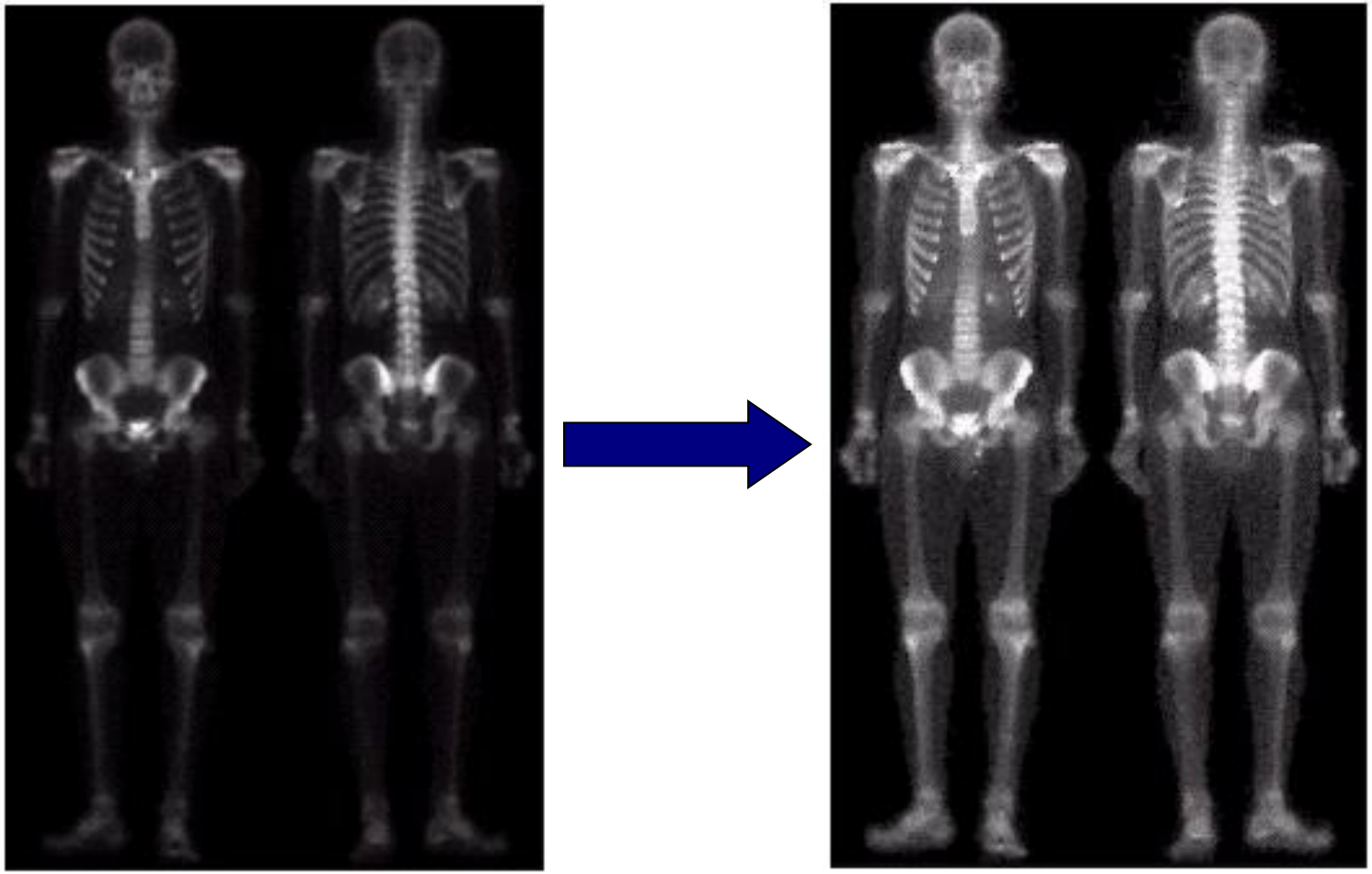
(d)

Combining Spatial Enhancement Methods (cont…)



Combining Spatial Enhancement Methods (cont…)

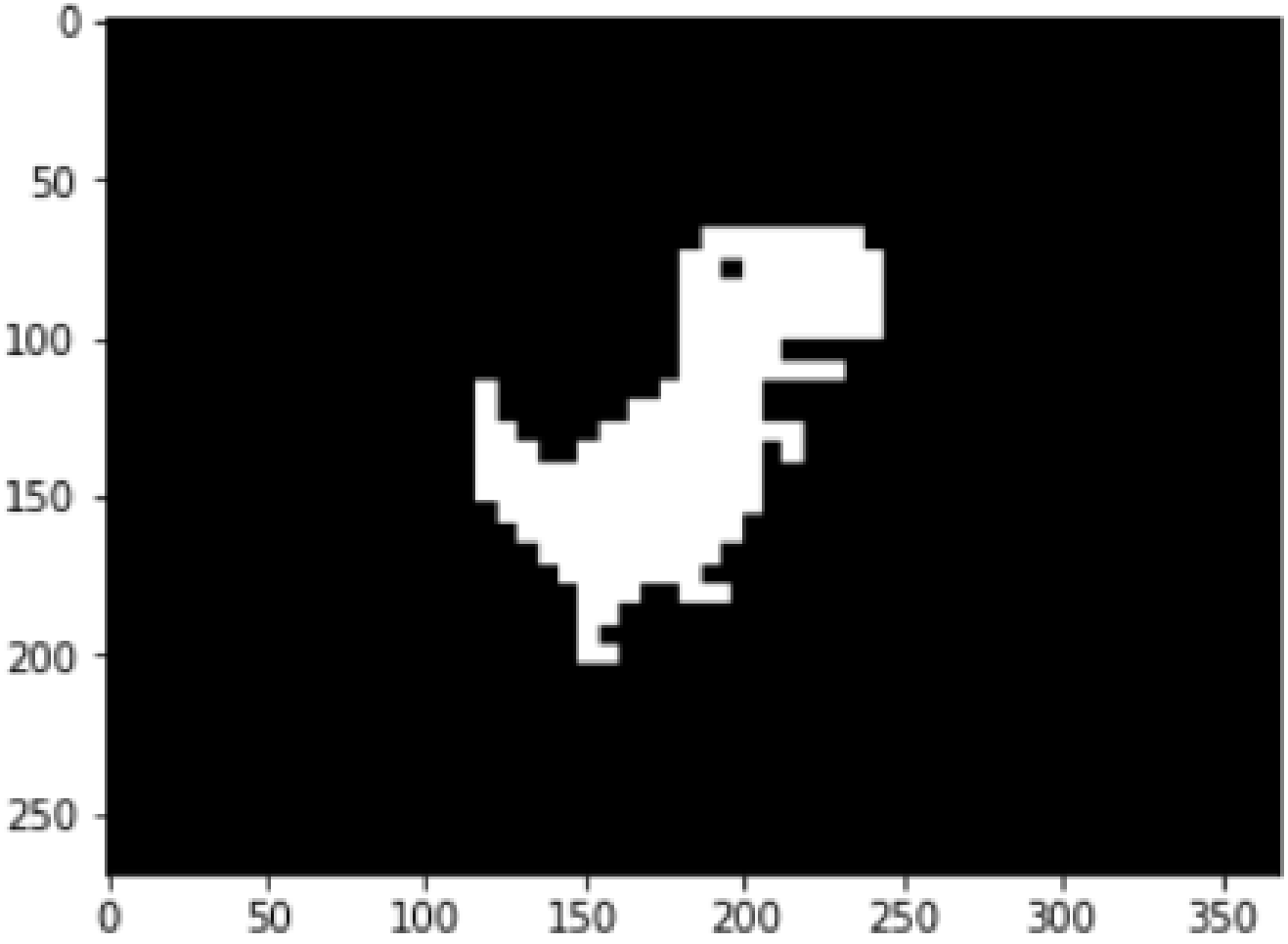
Compare the original and final images



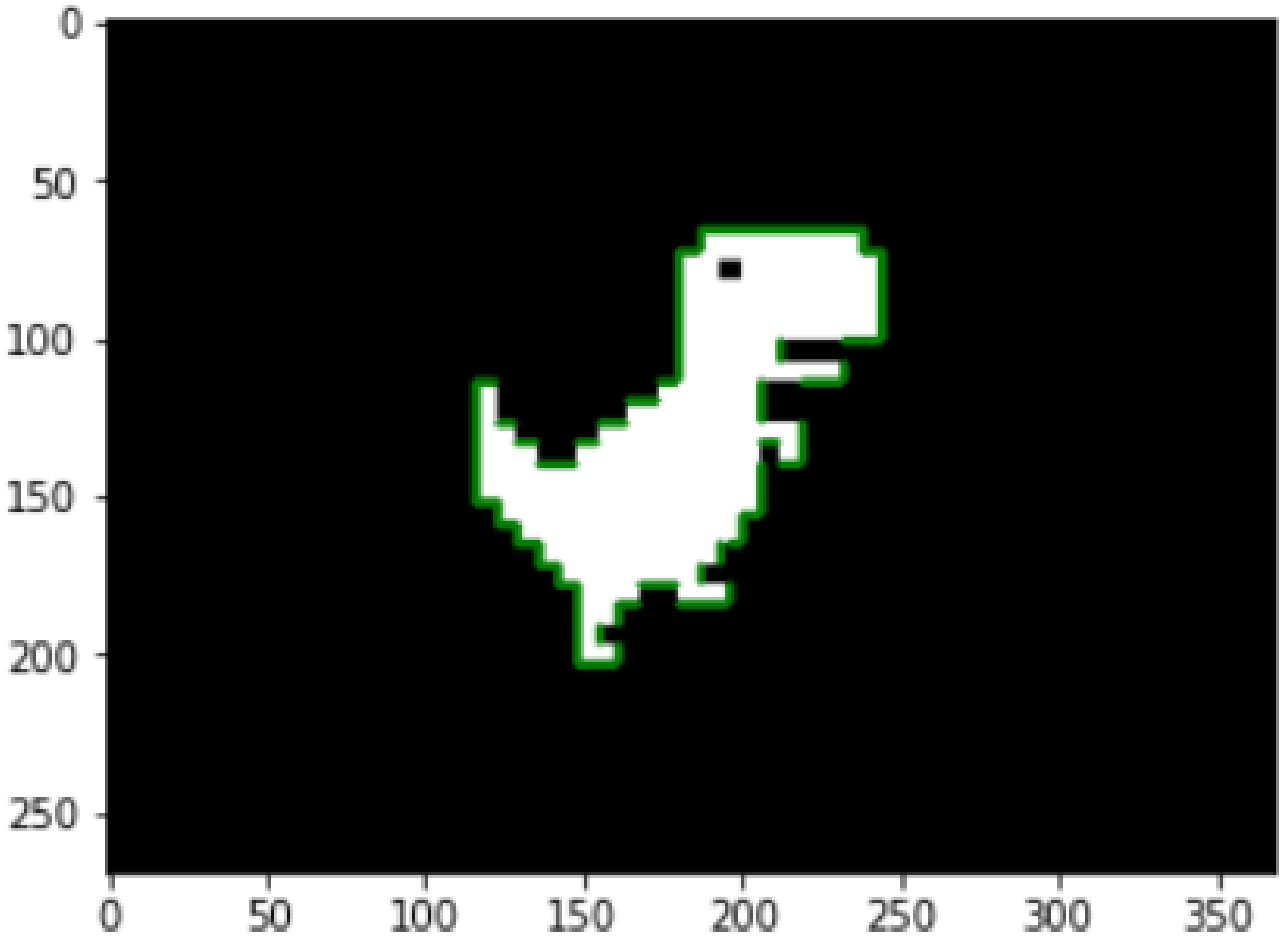
2. Find Contours Function

- Implementating cv2.findContours(image, cv2.RETR_EXTERNAL, cv2.CHAIN_APPROX_NONE) function from scratch.
- I have implemented it in two mode.
  - Original image:

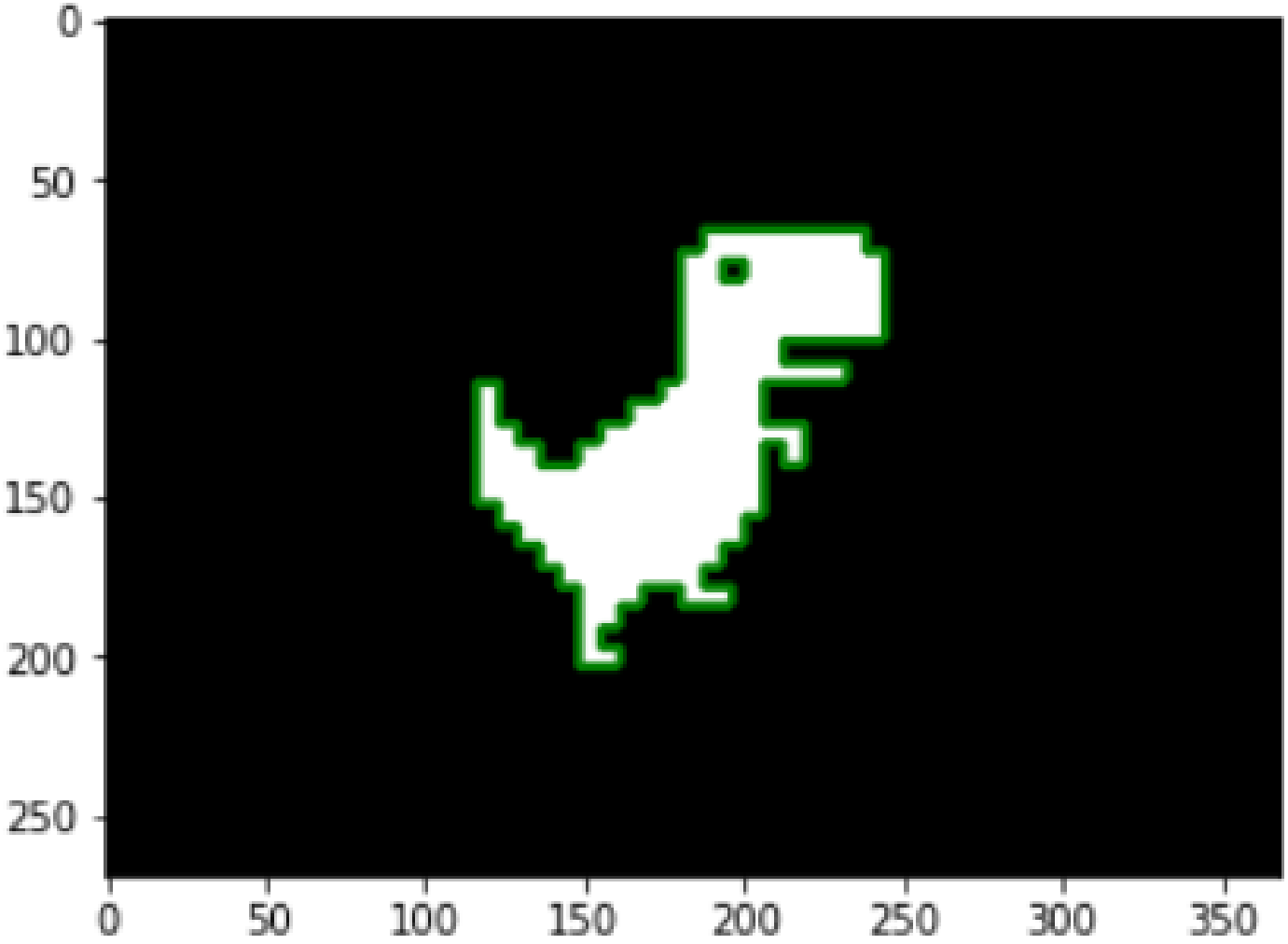
- Thresholded image:



- RETR_EXTERNAL:

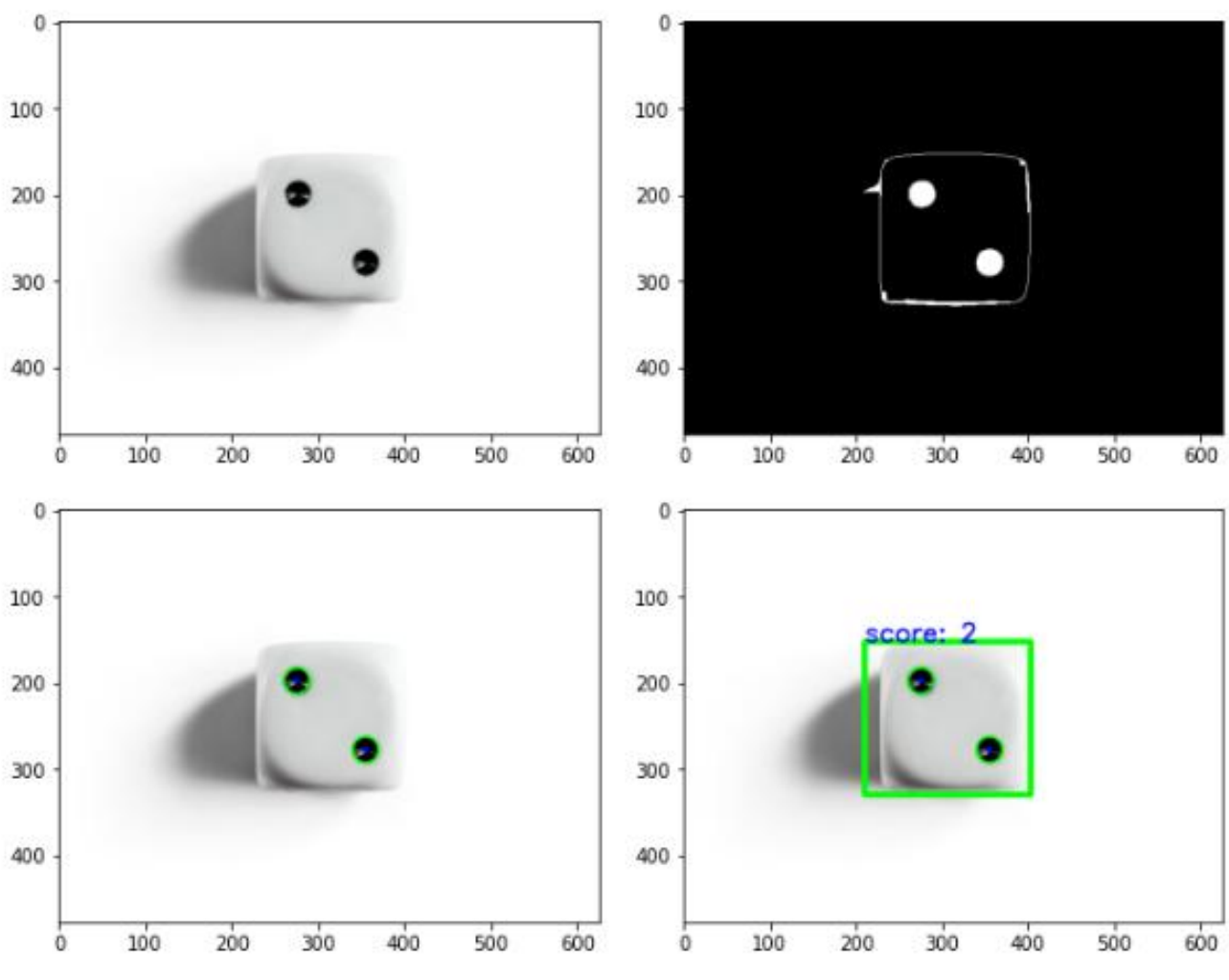


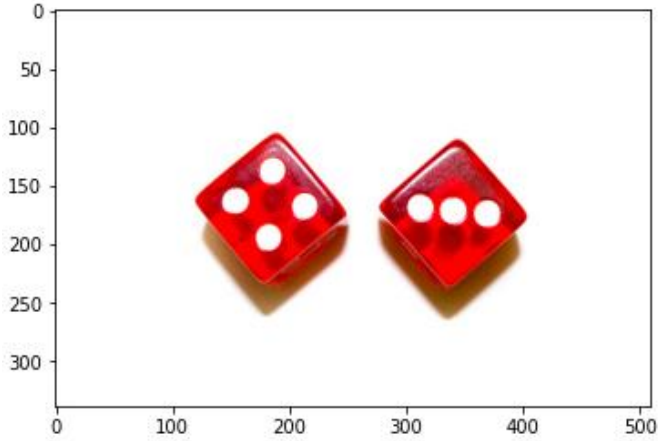
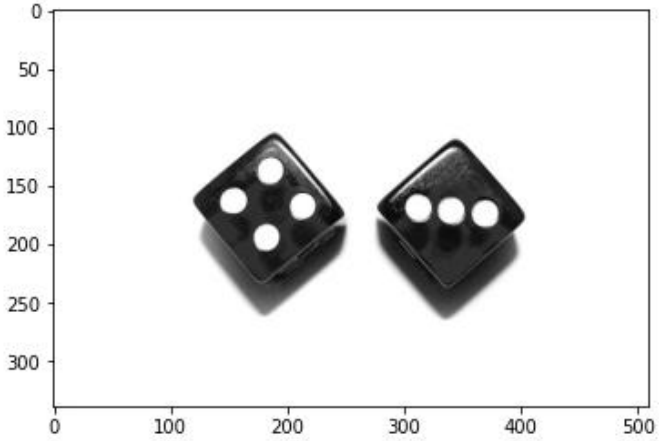
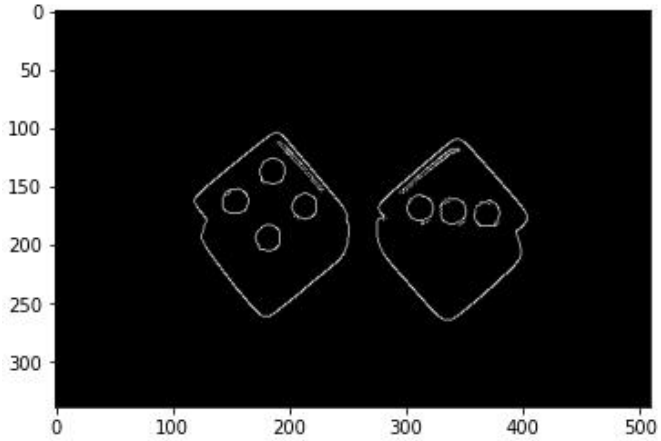
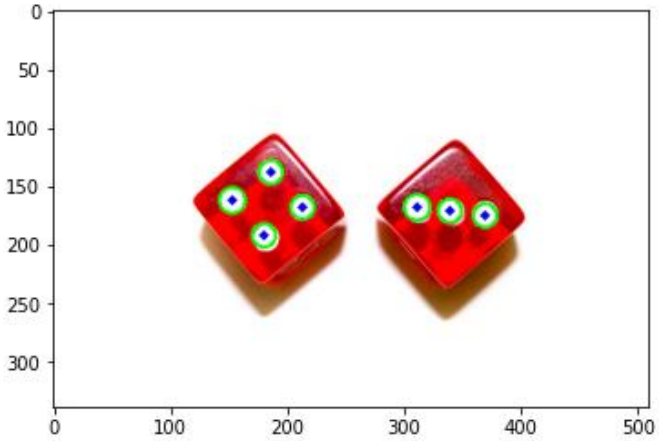
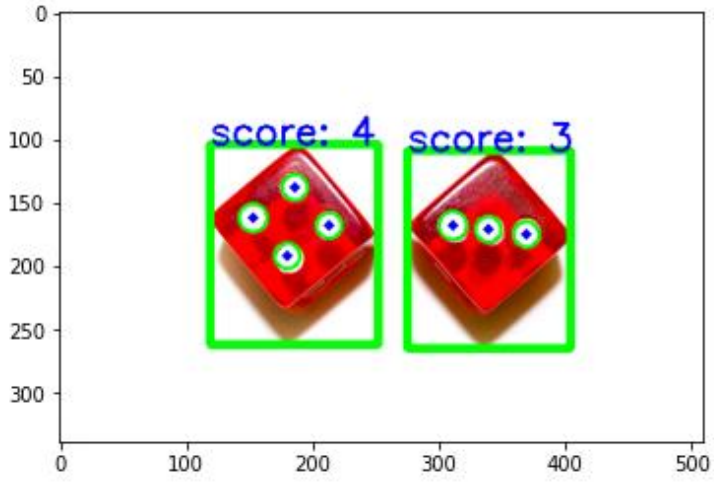
- RETR_LIST:



3. Dice Recognition

- 6-sided Dice Recognition using **opencv** methodes(canny, threshold, close morphology, HoughCircles and etc).

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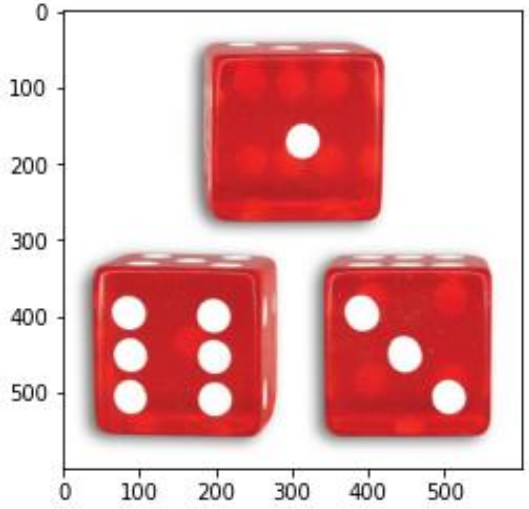
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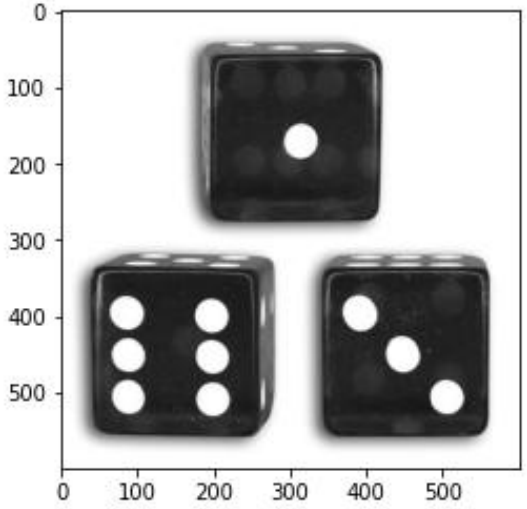
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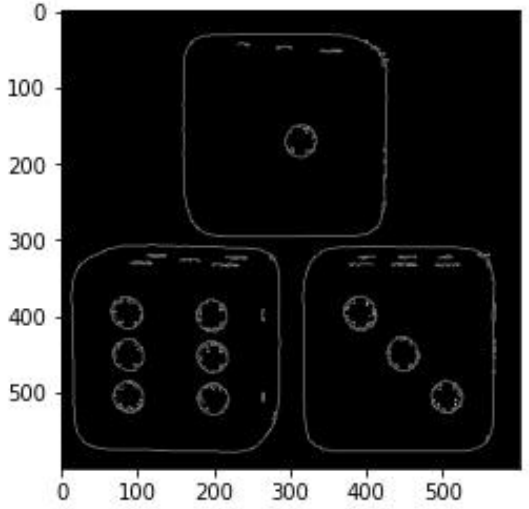
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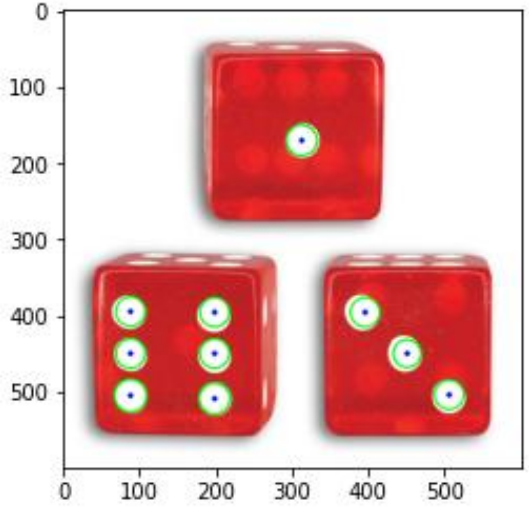
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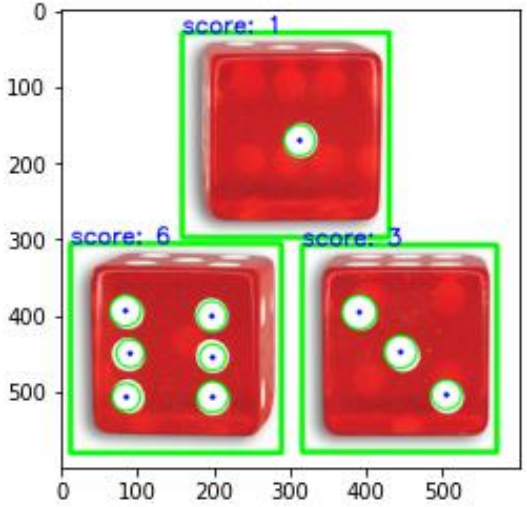
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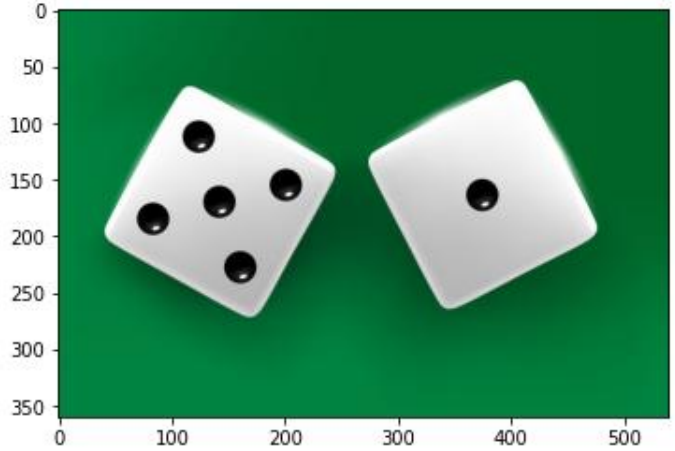
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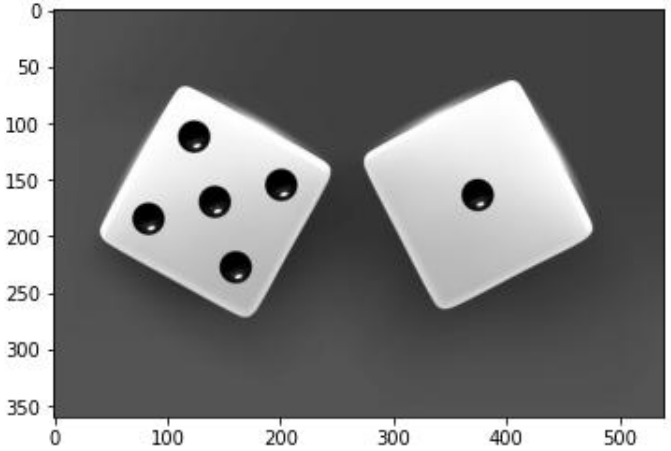
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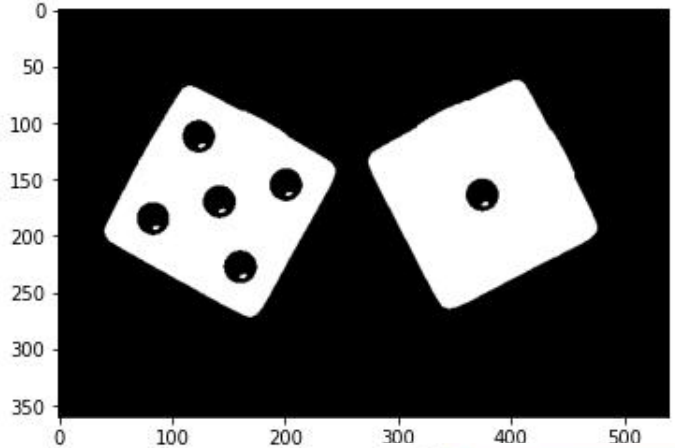
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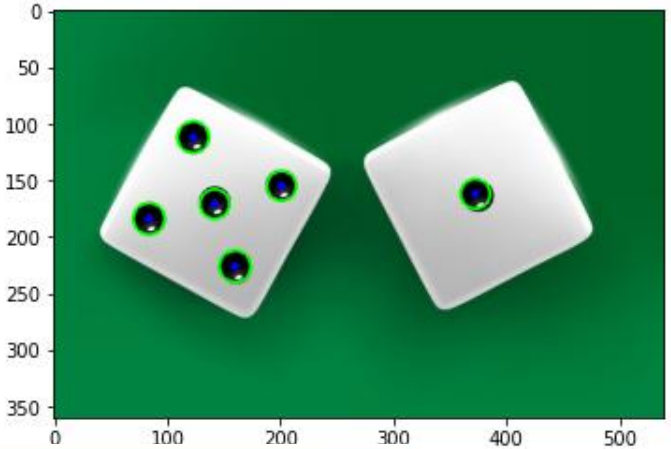
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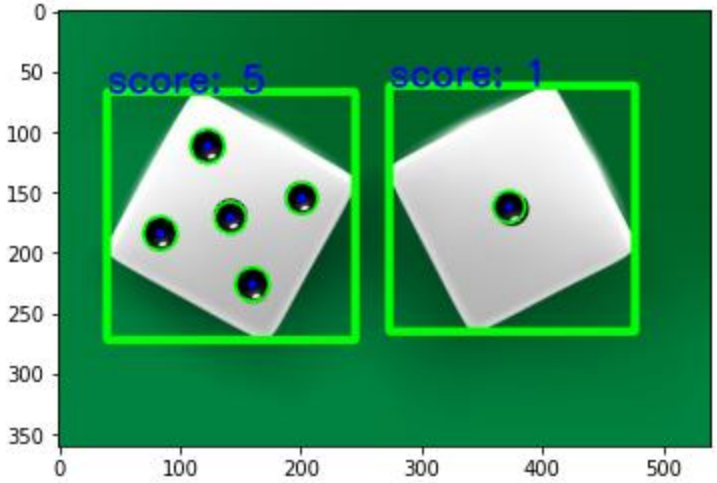
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