

# CSE 5524 HW3

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1)

Input Image:



Output Image:

Gaussian pyramid:



Laplacian pyramid:



Reconstructed Image:



2)

Output Image:

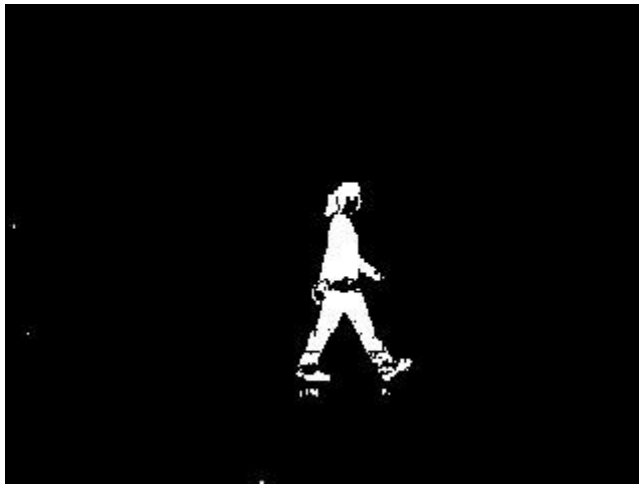


T=20:

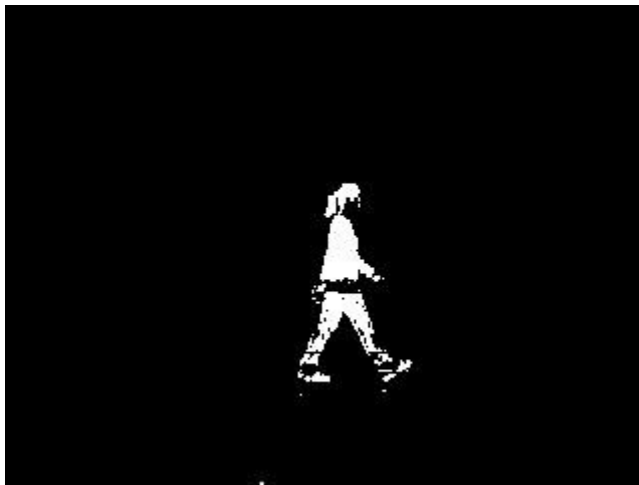


T=40:

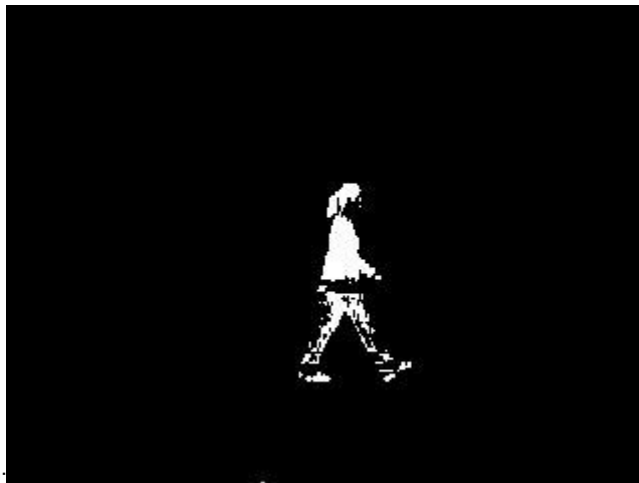
T=60:



T=80:



T=100:



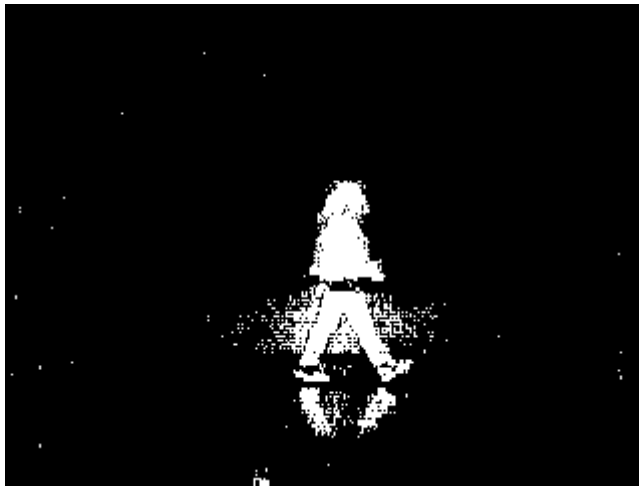
Discussion:

When  $T$  is too small, the extracted object has too much noise; and when  $T$  is too large, we miss some parts in the extracted object. We think  $T=60$  gives us the best extraction. However, the face and the haunch are not extracted well because their colors are similar to the background.

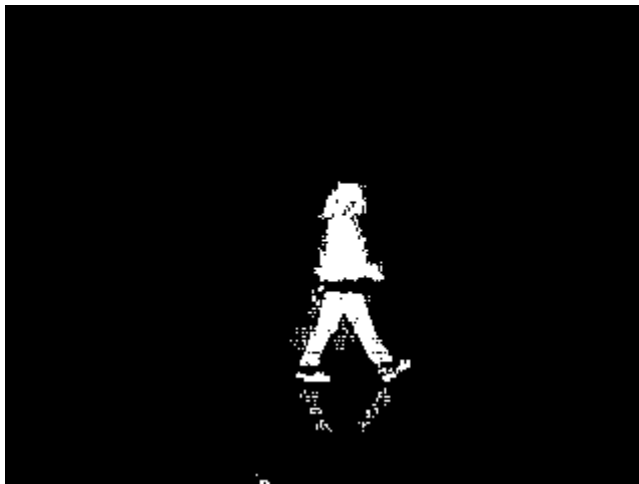
3)

Output Image:

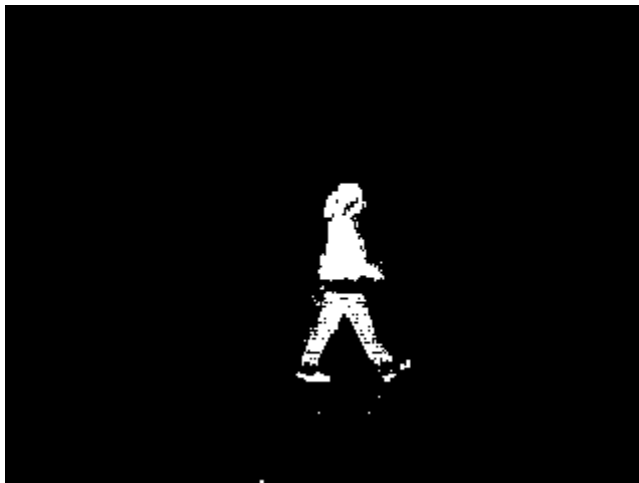
T=6:



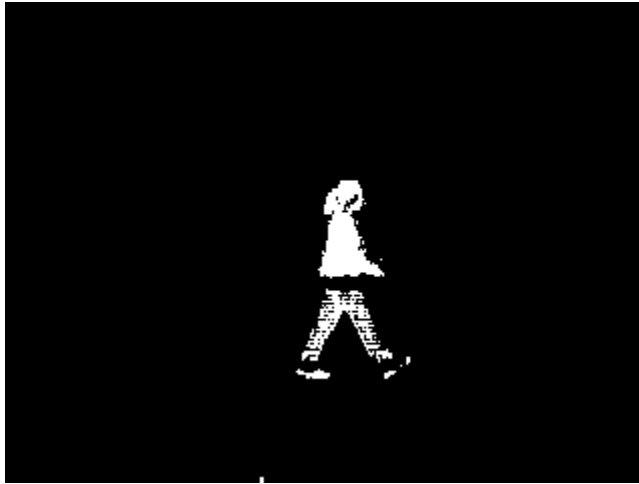
T=12:



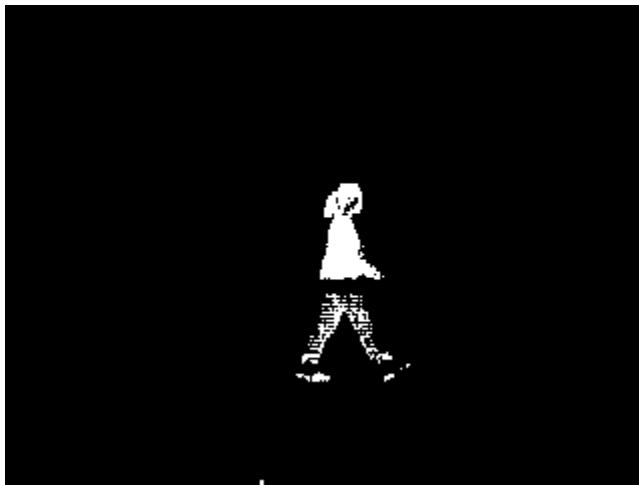
T=18:



T=24:



T=30:

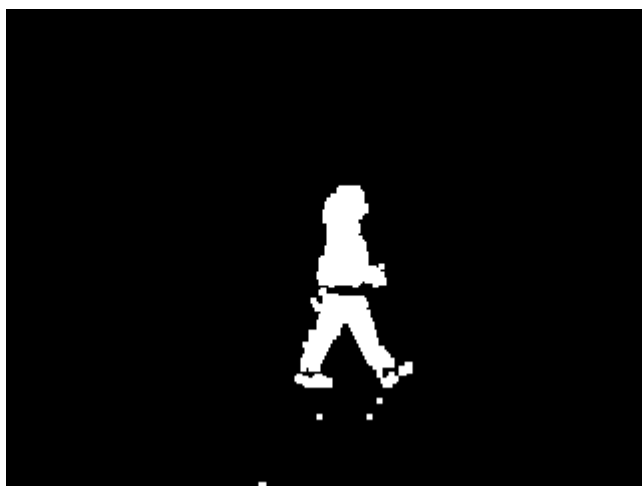


Discussion:

The same as Task 2, when  $T$  is too small, the extracted object has too much noise; and when  $T$  is too large, we miss some parts in the extracted object. We think  $T=18$  gives us the best extraction. By using using statistical distances, the face is extracted better than before. However, the haunch is still extracted well.

**4)**

**Output Image:**



5)

Output Image:

