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## Should I trust this image ?

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# SHOULD I TRUST THIS IMAGE ?

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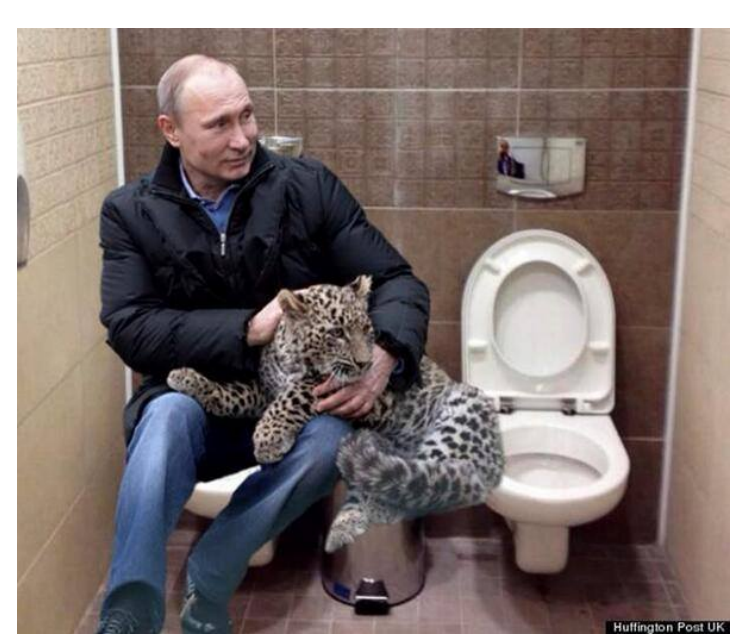


Computer !  
Help me !

Is this image forged ?



## Can I find similar images?



Query



Candidate 1



Candidate 2



Candidate 3



Candidate 4



Candidate 5

## How these images differ?

### Detecting the outliers



Query



Selected candidate

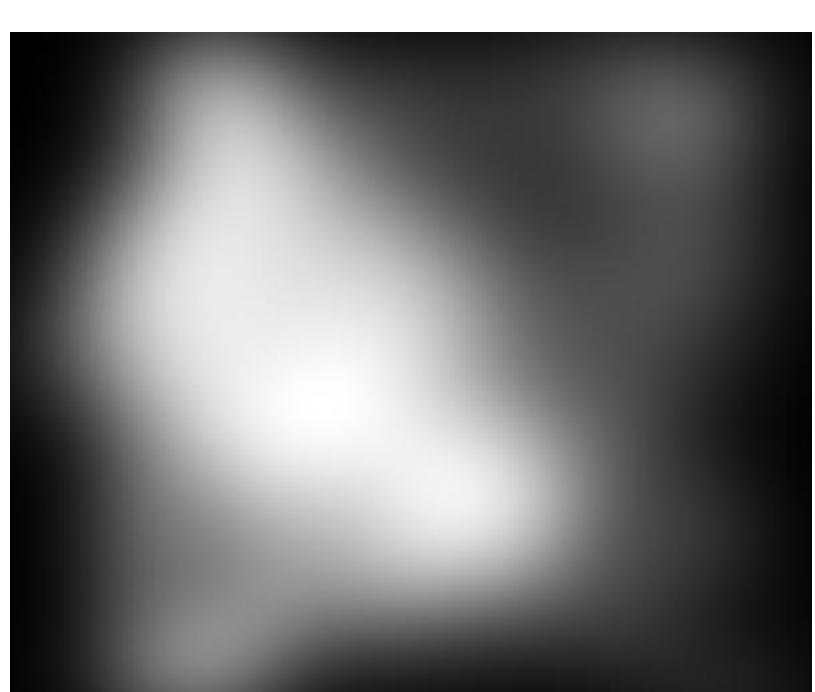


Estimated homography

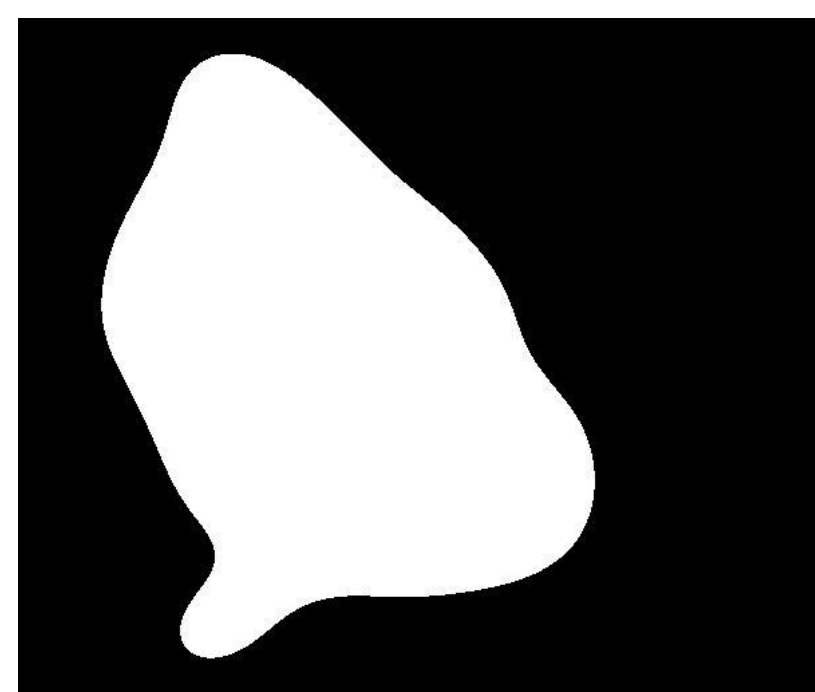


Outliers

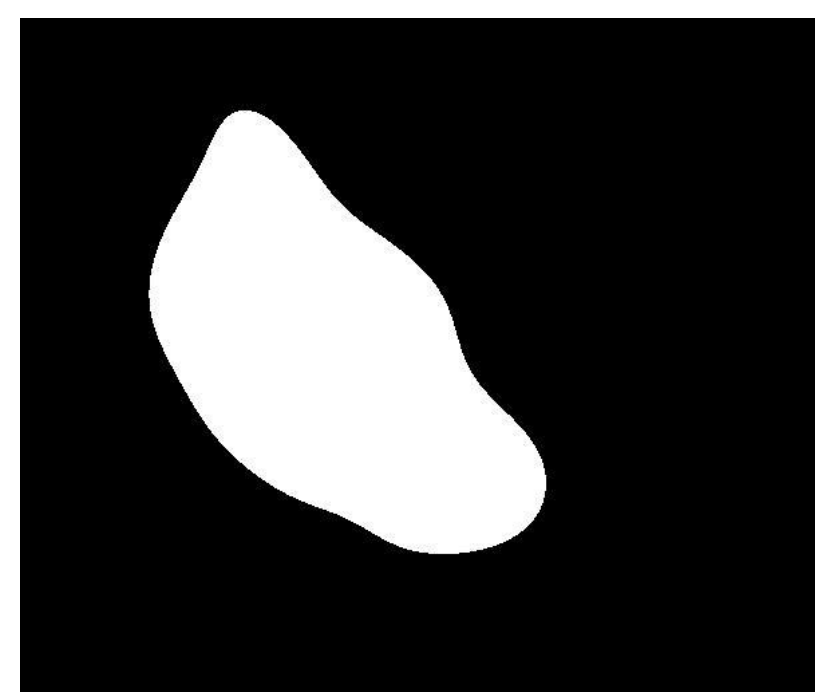
### Transforming the outliers into a binary map



Outliers density map (DM), gaussian kernel



Binarized DM ( $\theta = 0.50 \times \max$ )



Binarized DM ( $\theta = 0.75 \times \max$ )



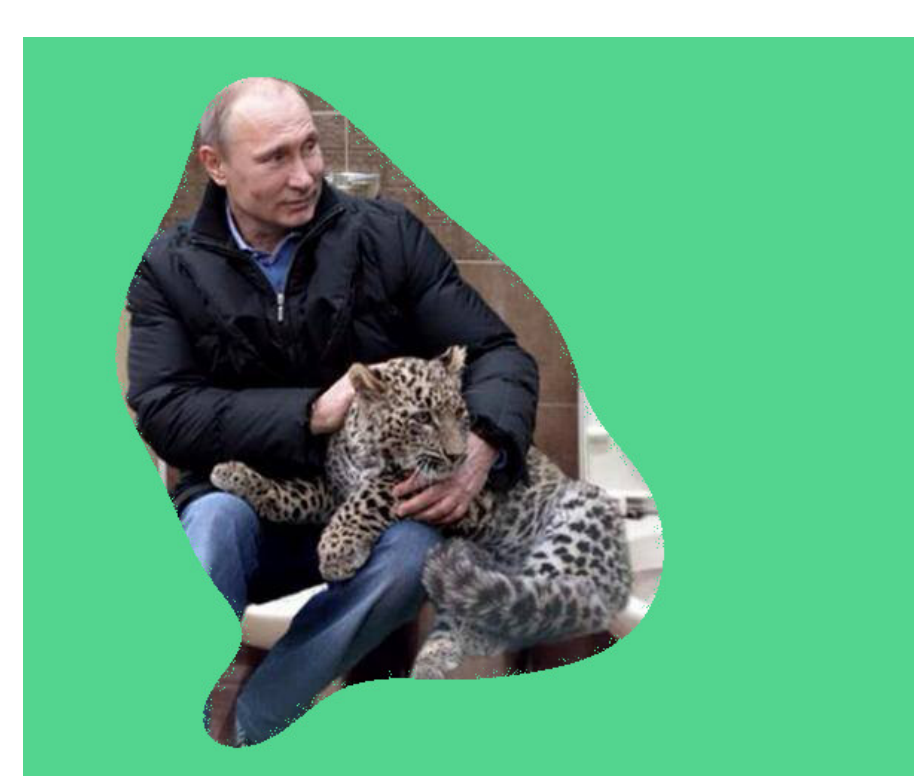
Binarized DM, uniform kernel



Ground truth

## Ok, and then, what can be said?

### Modifications characterization



Detected area extraction ( $\theta = 0.50$ )

Type of modification:

- Text
- Shape
- Person
- Other

### Which one is the original image?

Is there any visual information relevant to identify the original image?

