SURF + SVM for object recognition

Kwseow **Aug 6**

Hi all,
I would like to use SURF (for local invariant) + SVM to do object recognition. Any advice?

I tried HOG + SVM but HOG is sensitive to rotation, but in this case, the object I'm trying to detect can be rotated.

Am I on the right track to use SURF + SVM instead?

Appreciate any advice.

Cheers

ThamNgapWei **Aug 6**

This is possible, for more details, you can check the **bag of visual words** chapters in the courses and **this example.**

edit : **another good example**

Adrian Chief PyImageSearcher **Aug 6**

What types of images are you trying to recognize? If rotation is an issue or if the object will be partially hidden/overlapped in your images, then keypoint detectors + local invariant descriptors are good choice.

As **@ThamNgapWei** mentioned, you'll want to read-up on the BOVW lessons in the course. Lessons 4.6-4.10 also detail how to apply the BOVW method for image classification directly.

Kwseow **Aug 6**

Thanks **@Adrian** and **@ThamNgapWei** for the advice.

I'm trying to count the number of tools in a give image. And as Adrian highlighted, they can be rotated or partially hidden and/or overlapped.

Kwseow **Aug 7**

One more point. The objects will be placed on a table before an image is taken for the counting. I'm wondering do I really need to use SVM in this case?

Adrian Chief PyImageSearcher **Aug 7**

Possibly not. You might be able to get away with a simple k-NN classifier, provided you can localize each of the objects in the image via contour extraction. Again, without seeing any images, it's pretty challenging to say whether or not you'll need a SVM.

My suggestion would be to lay the objects out on the table and then see if you can apply simple image processing techniques to extract each of the objects from the image. If you can, then extract the ROI and then pass it on to a classifier.

ThamNgapWei **Aug 8**

Maybe **simple contours trick** could help you solve your problems. Like Adrian said, without pictures, it is really hard to determine you need SVM or not.

Aug 6
1 / 7
Aug 6
Aug 8