Captcha image recognition

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Motivation

• Crack online captcha
• method applicability
• Some darknet cases
• Specific cases
Steps

• Collect
• Preprocess
• Training method
General preprocess methods

- Binarization $[0,255]$
- Noise line / point
- $8$ around pixels
- Filter
- Erosion & dilation
- Segmentation

Source: [1] opencv documentation
SVM (Support Vector Machine)

- Segment
- Collect letter
- Extract feature (Large Size?)
- Sum / Resize
- Limitation
- >95% if well segment
CNN

- Popular, accurate than svm(>98%)
- Overfit
- Large training set
- Not necessary to segment
- Time-consuming
Future work

• Darknet

Source:[2] Screenshot from Darknet market
Reference

- [1] https://docs.opencv.org/2.4/doc/tutorials/imgproc/erosion_dilatation/erosion_dilatation.html