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Why use 1*1 convolution layer instead of full connect layer in SENet? For the less parameter? #16

New issue

Closed

miraclewkf opened this issue on Sep 14 · 3 comments



miraclewkf commented on Sep 14

Why use 1*1 convolution layer instead of full connect layer in SENet? For the less parameter?



hujie-frank commented on Sep 15 • edited

Owner

In fact, the 1x1 convolution layer is equivalent to fc layer here as the input spatial dimension is squeezed to 1x1.



miraclewkf commented on Sep 15

So the reason is not to reduce the amount of parameter? A fc layer has CC/r parameters, but a 1x1 convolution layer only has C/r parameters.



hujie-frank commented on Sep 15

Owner

As for 1x1 convolutional layer whose input spatial dimension is 1x1, the amount of parameters you calculated is wrong.
A 1x1 convolutional kernel has C parameters, so a 1x1 convolutional layer which comprises C/r convolutional kernels has CC/r parameters in total, matching the corresponding fc layer whose output number is C/r.

hujie-frank closed this on Sep 18

Assignees

No one assigned

Labels

None yet

Projects

None yet

Milestone

No milestone

2 participants

