note of 《Fast Training of Convolutional Networks through FFTs》

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1   content

Fast Training of Convolutional Networks through FFTs, a 14-year paper, was one of the first papers to use FFTS for convolutional operations in neural networks. The core idea of this paper is to use fft to accelerate convolution calculation. In the 1990s, it was proposed to use fft to accelerate calculation, but at that time, there were fewer for number of feature maps used in convolutional networks , and the acceleration effect was not obvious. Now, as the data sets are getting larger and larger, fft can reuse the transformed feature maps, which is very effective when the data sets are huge.
And the Fourier transform of the filter can be computed offline in advance during inference.

2   Feelings

The earliest FFT was used for convolutional computation of neural networks, note the paper cited in this paper