Caffe

Deep learning framework by the BVLC

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Caffeinated Convolution

The Caffe strategy for convolution is to reduce the problem to matrix-matrix multiplication. This linear algebra computation is highly-tuned in BLAS libraries and efficiently computed on GPU devices.

For more details read Yangqing's Convolution in Caffe: a memo.

As it turns out, this same reduction was independently explored in the context of conv. nets by

> K. Chellapilla, S. Puri, P. Simard, et al. High performance convolutional neural networks for document processing. In Tenth International Workshop on Frontiers in Handwriting Recognition, 2006.