

Framework	Apache Singa	Apache Spark MLlib	Caffe	Theano	Torch	TensorFlow	Microsoft Cognitive Toolkit	Veles	MXnet	Chainer	PaddlePaddle	Deeplearning4J
Internet	<a href="https://singa.incubator.apache.org">https://singa.incubator.apache.org</a>	<a href="https://spark.apache.org/mlib">https://spark.apache.org/mlib</a>	<a href="http://caffe.berkeleyvision.org">http://caffe.berkeleyvision.org</a>	<a href="http://deeplearning.net/software/theano">http://deeplearning.net/software/theano</a>	<a href="http://torch.ch">http://torch.ch</a>	<a href="http://www.tensorflow.org">www.tensorflow.org</a>	<a href="http://www.microsoft.com/en-us/research/product/cognitive-toolkit">www.microsoft.com/en-us/research/product/cognitive-toolkit</a>	<a href="https://velesnet.ml">https://velesnet.ml</a>	<a href="http://mxnet.io">http://mxnet.io</a>	<a href="http://chainer.org">http://chainer.org</a>	<a href="http://www.paddlepaddle.org/">www.paddlepaddle.org/</a>	<a href="https://deeplearning4j.org/">https://deeplearning4j.org/</a>
GitHub Repository ( <a href="https://github.com/">https://github.com/</a> )	apache/incubator-singa	apache/spark	BVLC/caffe	Theano/Theano	torch/torch7	tensorflow/tensorflow	microsoft/CNTK	samsung/veles	dmlc/mxnet	pfnet/chainer	PaddlePaddle/Paddle	deeplearning4j/deeplearning4j

### Programmierschnittstellen

C++	●	○	●	○	●	●	●	●	●	○	●	○
Java	●	●	○	○	○	●	○	○	○	○	○	●
Python	●	●	●	●	○	●	●	●	●	●	●	●
CLI <sup>1)</sup>	○	○	●	○	○	○ <sup>11)</sup>	●	○	○	○	○	○ <sup>14)</sup>
Sonstige	–	Scala, R	C, Matlab	–	C, Lua, LuaJIT	C, Go	BrainScript, C#, .NET <sup>12)</sup>	–	Julia, R, Scala, Matlab, Javascript	–	–	Clojure, Scala

### Plattformen

Linux	●	●	●	●	●	●	●	●	●	●	●	●
Windows	●	●	●	●	●	●	●	○	●	○	○	●
Mac OS X	●	●	● <sup>3)</sup>	●	● <sup>8)</sup>	●	○ <sup>13)</sup>	○	●	○	○	●
Sonstige	AWS, Docker	Amazon EC2, Mesos	AWS <sup>4)</sup>	AWS <sup>6)</sup> , Docker	Android, iOS <sup>9)</sup>	Docker, Google Cloud Platform	Azure, Docker	–	AWS, Azure, GCE, Yarn, Raspberry PI, Docker	Docker	Docker	Android

### CPU-Schnittstelle

CUDA	●	●	●	●	●	●	●	●	●	●	●	●
OpenCL	●	● <sup>2)</sup>	● <sup>5)</sup>	○ <sup>7)</sup>	● <sup>10)</sup>	○ <sup>7)</sup>	○	●	○ <sup>7)</sup>	○	○	○ <sup>7)</sup>

● Ja ○ nein <sup>1)</sup> Kommandozeile (Command Line Interface) <sup>2)</sup> über Erweiterungen <sup>3)</sup> Windows über Branch <sup>4)</sup> Amazon Machine Image (AMI) <sup>5)</sup> OpenCL über Branch <sup>6)</sup> Bitfusion AMI <sup>7)</sup> OpenCL-Unterstützung auf der Roadmap <sup>8)</sup> Windows nicht offiziell unterstützt, siehe <https://github.com/torch/torch7/wiki/Windows>

<sup>9)</sup> über Branches <sup>10)</sup> OpenCL über Drittanbieter <sup>11)</sup> APIs für C++, Java und Go noch „experimental“ <sup>12)</sup> C#, .NET In Beta <sup>13)</sup> OS-X-Unterstützung via Docker auf der Roadmap <sup>14)</sup> Python via Keras