Theano, Pylearn2, libgpuarray: Sharing and Future

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Future
Theano

- Easier C code development and better documentation of that
- Faster compilation
- Multi-GPU
- Better looping (update to scan)
- Allow checkpoint with GPU to reload without GPU
- Less memory allocation (lower Theano overhead)
- Faster convolution
Future

libgpuarray

- Find other projects to use it?
- More functionality as NumPy
- Move some of the functionality from Python/Theano to the C level
- Optimize the kernel selection and parametrization based on the GPU
Future

Pylearn2

- RNN
- Better hyperparameter search support, using e.g. Hyperopt
- Documentation
- Checkpoint
- Better support for sparse dataset
- Machine translation examples
- Gated activations for conditional computation
- Variational Auto-Encoders
Simplifying code sharing between

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2. Common base object! **libgpuarray**
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3. Otherwise: put important implementation (e.g. convolution) in separate file and use **raw ptr/shape/strides** as inputs. Document that interface.
Future

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