MEMLA Method for Experiment with Machine Learning Algorithms

Hipotesis

If research work is done on deep learning and machine learning, maybe it could be used to enhance the performance of a wide variety of applications and problems with computer vision, user interfaces, speech recognition and further.

Alcance

train models on CPU vs. GPU (i.e. tensorflow-gpu) train models with different architectures: MLP, DBN, DNN, DQN, DYNAMIC_REINFORCEMENT LEARNING train models with different algorithms: BACKPROP, ADAM, SGD, RMSprop, Delta, ADAMW evaluate models with different metrics: accuracy, loss function, event logging, sample-efficiency, latency evaluate models on a variety of datasets: MNIST, CIFAR10, CIFAR100, Fashion-MN

Limitaciones

post-processing features (e.g. dimensionality reduction) test models on another machine learning (e.g. linear models, tree ensembles) test models on another deep learning framework (e.g. Caffe, MXNet, TensorFlow, Theano) test models on another programming language (e.g. Go, Java, Scala, Clojure, Python) test models on another operating system (e.g. Linux, macOS, Windows) test models with other hardware (e.g. multi-core CPUs, GPUs, FPGAs)