Lua Classics

This repository is a collection of classical Deep Learning models implemented in Lua using Torch. Implementations of algorithms utilize contemporary gradient-based methods as proposed by seminal works.

Installation

Install Lua, Torch & Dependencies

```
./install.sh
```

Algorithms

Following are the two classic algorithms implemented-

Alogrithm	Learning Rule	Location
Hopfield Network	Hebb Rule	hopfield_network.lua
Boltzmann Machine	Contrastive Divergence	boltzmann_machine.lua

Usage

To run a Hopfield Network with its default parameters on the mnist dataset, use the following-

```
lua main.lua -algo HopfieldNetwork -data mnist
```

Cite

If you find this repository helpful for your project then please cite the following-

```
@misc{karush17luaclassics,
  author = {Karush Suri},
  title = {Lua Classics},
  year = {2021},
  howpublished = {\url{https://github.com/karush17/lua-classics}}
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