
Subject: Re: Neural Networks

Posted by [d.poreh](#) on Tue, 12 Aug 2008 05:50:43 GMT

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On Jul 27, 2:13 pm, Chris <beaum...@ifa.hawaii.edu> wrote:

> On Jul 26, 11:13 pm, "[Rob]" <r08...@gmail.com> wrote:

>

>

>

>> Hi all,

>

>> I posted a query on here about a year ago relating toneuralnetworks

>> in IDL but I didn't get any response so I thought it might be worth

>> trying again.

>

>> The problem I'm currently working on for my PhD breaks down to

>> matching a known pattern/signature against a huge amount of data to

>> find cases where the pattern is present.

>

>> I don't know that much aboutneuralnetworks (just a few undergraduate

>> lectures on the basic principles) or exactly how I'd go about

>> implementing something like this but it seems that IDL is fairly well

>> suited to this kind of task due to it's ability to sort and match

>> large arrays of data.

>

>> Have many people worked onneuralnetworks in IDL before? I haven't

>> had much luck searching the group for answers apart from a few old

>> (and very old!) posts on the subject asking pretty much the same as I

>> am.

>

>> I'd much prefer to use IDL for this if possible but I'm starting to

>> wonder whether something like Matlab might be better suited as there

>> seems to be quite a bit more documentation and example code for using

>> neuralnetworks in IDL.

>

>> Cheers

>

>> Rob

>

> I haven't used IDL for NN programming, though I've been interested in

> the idea.

>

> My suspicion is that, while you could probably implement a pre-learnedneuralnetwork in IDL, it would not be efficient at actually learning

> the proper weights. Typical algorithms for learning NN weights (eg

> backpropagation) are dominated by looping. IDL usually chokes on such

> tasks unless there is a way to eliminate some of the loops by using

> its optimized array operations. I may be wrong, but I don't think a

- > nonlinear, iterative process like backpropagation could be vectorized
- > very much.
- >
- > For general info on implementing NNs, I might look at Tom Mitchell's
- > "Machine Learning," and maybe some open source implementations (like
- > JOONE for Java)
- >
- > chris

look at Morton Canty's book:

Image analysis and pattern recognition for remote sensing page 100-
Cheers
