A HillClimbing METHOD TO CONSTRUCT NEURAL NETWORK AUTOMATICALLY

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ABSTRACT

A method based on Hill Climbing Algorithm is use to build Neural Network model automatically. In our experiment, several simple robust model was construct to recognize handwritten digit on MNIST test base.

Keywords Neural Network · Deep Learning · MNIST

1 Introduction

The deep learning technology has imporved nerural network for several years. People try to find better models based on their intuitive sense. In this paper, We propose a method to evolve neural model automatically from a single layer model.

2 Background

Background Background

See Section 2.

3 Method

Method Me

3.1 Measure: The height of Hill Climbing Algorithm

Measure Measur

$$\xi_{ij}(t) = P(x_t = i, x_{t+1} = j | y, v, w; \theta) = \frac{\alpha_i(t) a_{ij}^{w_t} \beta_j(t+1) b_j^{v_{t+1}}(y_{t+1})}{\sum_{i=1}^N \sum_{j=1}^N \alpha_i(t) a_{ij}^{w_t} \beta_j(t+1) b_j^{v_{t+1}}(y_{t+1})}$$
(1)

^{*}Use footnote for providing further information about author (webpage, alternative address)—not for acknowledging funding agencies.

Table 1: Sample table title

Model	Accuracy	Comment
fc1 fc1s fc2 fc2s fc2net LeNet	74% 92% 10% 92% 95%	loss= - infty

3.1.1 Neighbor: How to select a neighbor model?

Neighbor: How to select a neighbor model? Neighbor: How to select a neighbor model? Neighbor: How to select a neighbor model? Neighbor: How to select a neighbor model?

Paragraph Paragraph Paragraph

4 Experiments

[1, 2] and see [3].

The documentation for natbib may be found at

http://mirrors.ctan.org/macros/latex/contrib/natbib/natnotes.pdf

Of note is the command \citet, which produces citations appropriate for use in inline text. For example,

\citet{hasselmo} investigated\dots

produces

Hasselmo, et al. (1995) investigated...

https://www.ctan.org/pkg/booktabs

4.1 Figures

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4.2 Tables

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²Sample of the first footnote.



Figure 1: Sample figure caption.

Table 2: Sample table title

	Part	
Name	Description	Size (μm)
Dendrite Axon Soma	Input terminal Output terminal Cell body	~ 100 ~ 10 up to 10^6

4.3 Lists

- Lorem ipsum dolor sit amet
- consectetur adipiscing elit.
- Aliquam dignissim blandit est, in dictum tortor gravida eget. In ac rutrum magna.

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