
SOLVING EQUATION BY AUTO PROGRAMMING *in JavaScript*

A PREPRINT

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ABSTRACT

We propose a way to find symbolic answer of equation based on the Hill-Climbing Algorithm. The algorithm optimize the answer based on the both side difference of equation. We

Keywords Differential Equation · Symbolic · Artificial Intelligence

1 Introduction

For computer, solve equation symbolically is difficult to be solved than numerically. However, symbolic solution is much better than numerically for the following reason.

1. Eash to understand. 2. Precision.

2 Headings: first level

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2.1 Headings: second level

Optimization equation :

$$\int_0^{\infty} f(x)dx \tag{1}$$

xxx

$$\int_0^{\infty} f(x)dx \xi_{ij}(t) = P(x_t = i, x_{t+1} = j | y, v, w; \theta) = \frac{\alpha_i(t) a_{ij}^{w_t} \beta_j(t+1) b_j^{v_{t+1}}(y_{t+1})}{\sum_{i=1}^N \sum_{j=1}^N \alpha_i(t) a_{ij}^{w_t} \beta_j(t+1) b_j^{v_{t+1}}(y_{t+1})} \tag{2}$$

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

2.1.1 Headings: third level

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3 Examples of citations, figures, tables, references

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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>

3.1 Figures

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3.2 Tables

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²Sample of the first footnote.



Figure 1: Sample figure caption.

Table 1: Sample table title

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

3.3 Lists

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

References

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