



# Mixture of Experts

## A Survey

Sun Yafeng

University of Science and Technology of China

yaroxy@mail.ustc.edu.cn

yaroxy@github

2025.09.17

## Preface

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim aequale doleamus animo, cum corpore dolemus, fieri tamen permagna accessio potest, si aliquod aeternum et infinitum impendere malum nobis opinemur. Quod idem licet transferre in voluptatem, ut postea variari voluptas distinguique possit, augeri amplificarique non possit. At etiam Athenis, ut e patre audiebam facete et urbane Stoicos irridente, statua est in quo a nobis philosophia defensa et collaudata est, cum id, quod maxime placeat, facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet, ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum defuturum, quas natura non depravata desiderat. Et quem ad me accedis, saluto: 'chaere,' inquam, 'Tite!' lictores, turma omnis chorusque: 'chaere, Tite!' hinc hostis mi Albucius, hinc inimicus. Sed iure Mucius. Ego autem mirari satis non queo unde hoc sit tam insolens domesticarum rerum fastidium. Non est omnino hic docendi locus; sed ita prorsus existimo, neque eum Torquatum, qui hoc primus cognomen invenerit, aut torquem illum hosti detraxisse, ut aliquam ex eo est consecutus? – Laudem et caritatem, quae sunt vitae sine metu degendae praesidia firmissima. – Filium morte multavit. – Si sine causa, nollem me ab eo delectari, quod ista Platonis, Aristoteli, Theophrasti orationis ornamenta neglexerit. Nam illud quidem physici, credere aliquid esse minimum, quod profecto numquam putavisset, si a Polyaeno, familiari suo, geometrica discere maluisset quam illum etiam ipsum dedocere. Sol Democrito magnus videtur, quippe homini erudito in geometriaque perfecto, huic pedalis fortasse; tantum enim esse omnino in nostris poetis aut inertissimae segnitiae est aut fastidii delicatissimi. Mihi quidem videtur, inermis ac nudus est. Tollit definitiones, nihil de dividendo ac partiendo docet, non quo ignorare vos arbitrer, sed ut.

# Contents

|                                   |          |
|-----------------------------------|----------|
| <b>Preface</b> . . . . .          | <b>2</b> |
| <b>Chapter 1 Hello</b> . . . . .  | <b>1</b> |
| 1.1 HELLO . . . . .               | 1        |
| 1.2 HELLO . . . . .               | 1        |
| <b>Chapter 2 模板介绍</b> . . . . .   | <b>2</b> |
| 2.1 模板说明 . . . . .                | 2        |
| 2.2 模板下载 . . . . .                | 2        |
| 2.3 模板使用 . . . . .                | 2        |
| <b>Chapter 3 模板设置说明</b> . . . . . | <b>3</b> |
| 3.1 颜色主题 . . . . .                | 3        |
| <b>References</b> . . . . .       | <b>5</b> |

## List of Image

## List of Table

|                  |       |          |
|------------------|-------|----------|
| <b>Table 3.1</b> | ..... | <b>3</b> |
|------------------|-------|----------|

# Chapter 1 Hello

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim aequale doleamus animo, cum corpore dolemus, fieri tamen permagna accessio potest, si aliquod aeternum et infinitum impendere malum nobis opinemur. Quod idem licet transferre in voluptatem, ut postea variari voluptas distinguere possit, augeri amplificarique non possit. At etiam Athenis, ut e patre audiebam facete et urbane Stoicos irridente, statua est in quo a nobis philosophia defensa et collaudata est, cum id, quod maxime placeat, facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et.

## 1.1 HELLO

$$f(x) = \sin x \quad (1.1)$$

$$\int_E f \, dx = \sum_{i=1}^k a_i m(A_i) \pi_{\alpha\beta\sigma\gamma\nu\epsilon\epsilon}. \oint_a^b \oint_a^b \prod_{i=1}^n \quad (1.2)$$

$$\int_0^1 D(x) \, dx = \int_0^1 \chi_{Q_0}(x) \, dx = m(Q_0) = 0 \quad (1.3)$$

## 1.2 HELLO

$$f(x) = \sin x \quad (1.4)$$

## Chapter 2 模板介绍

### 2.1 模板说明

本模板旨在用 Typst 对 **ElegantBook** 进行复刻.

### 2.2 模板下载

模板发布在 <https://github.com/a31474/quite-elegant-typ>

### 2.3 模板使用

下载后, 把模板放在本地文件夹下. 然后导入 `lib.typ` 即可使用

```
1 #import "lib.typ": *  
2  
3 #show: conf  
4 #default-cover()  
5 #default-outline()
```

注意把 `lib.typ` 改成其对应的本地路径

其中 `#default-cover()` 和 `#default-outline()` 分别添加了封面和目录. 若不需要, 可以不用加上.

#### *Definition 2.1 Hello*

Hello

## Chapter 3 模板设置说明

### 3.1 颜色主题

#### 3.1.1. 颜色主题设置

调用其他颜色主题的方法为

```
1 #show: it => conf(it, color-theme: "green")
```

或

```
1 #show: conf.with(color-theme: "green")
```

也可以自定义颜色主题, 如
















```
1 #show: it => conf(  
2   it,  
3   color-theme: (  
4     structure: rgb(255, 0, 0),  
5     main: rgb(0, 255, 0),  
6     second: rgb(0, 0, 255),  
7     third: rgb(255, 255, 0),  
8   ),  
9 )
```

需传入一字典, 字典的 keys 必须分别为 structure, main, second, third. 各自的 value 为对应颜色.

#### 3.1.2. 具体配置

下表为内置颜色主题的具体配置

Table 3.1

|           | green   | cyan  | blue  | gray  | black   | 主要使用的环境                     |
|-----------|---|---|---|---|---|-----------------------------|
| structure |  |  |  |  |  | chapter section subsection  |
| main      |  |  |  |  |  | definition exercise problem |
| second    |  |  |  |  |  | theorem lemma corollary     |



|       |   |   |   |   |   |             |
|-------|---|---|---|---|---|-------------|
|       | green   | cyan  | blue  | gray  | black   | 主要使用的环境     |
| third |  |  |  |  |  | proposition |

Definition 3.1 Hello

Hello

Definition 3.2 Hello

Hello

Definition 3.3 Hello

Hello

Definition 3.4 可积性

设  $f(x) = \sum_{i=1}^{\infty} a_i \chi_{A_i}(x)$  是  $E$  上的非负简单函数，中文其中  $\{A_1, A_2, \dots, A_k\}$  是  $E$  上的一个可测分割， $a_1, a_2, \dots, a_k$  是非负实数。定义  $f$  在  $E$  上的积分为  $\int_a^b f(x)$

$$\int_E f \, dx = \sum_{i=1}^k a_i m(A_i) \pi \alpha \beta \sigma \gamma \nu \epsilon \epsilon. \oint_a^b \oint_a^b \prod_{i=1}^n \tag{3.1}$$

一般情况下  $0 \leq \int_E f \, dx \leq \infty$ 。若  $\int_E f \, dx < \infty$ ，则称  $f$  在  $E$  上可积。

## References

- [1] S. Wang et al., Data Whisperer: Efficient Data Selection for Task-Specific LLM Fine-Tuning via Few-Shot In-Context Learning, Annual Meeting of the Association for Computational Linguistics (2025).
- [2] M. Paul, S. Ganguli, and G. K. Dziugaite, Deep Learning on a Data Diet: Finding Important Examples Early in Training, (2023).
- [3] H. Zheng, R. Liu, F. Lai, and A. Prakash, Coverage-centric Coreset Selection for High Pruning Rates, (2023).