Tidyverse

 $Xiaotao\ Shen(\)$ 2019-10-31

Contents

1		5
2		7
3	Literature	9
4	Methods	11
5	Applications	13
	5.1 Example one	13
	5.2 Example two	13
6	Final Words	15

4 CONTENTS

```
tidyverse , , , bookdown. R for data science,tidyver . . . . . . . . . . . . . . . .
```

6 CHAPTER 1.

.

• : . . , cell . .

. , sample1 gene2 , (sample_1) (gene_2) cell, . ?

 $\bullet \quad , \quad . \quad , \quad \text{case}, \quad \quad \text{case} \quad , \quad \quad .$

.

 $Table\ 2.1:\ <U+5BBD><U+6570><U+636E><U+793A><U+4F8B><U+6570><U+636E>$

	$sample_1$	$sample_2$	$sample_3$	$sample_4$	$sample_5$
gene_1	40	15	63	100	57
$gene_2$	69	8	67	9	50
$gene_3$	77	26	2	83	13
$gene_4$	39	52	94	60	55
gene_5	74	82	81	75	92

8 CHAPTER 2.

 $\label{eq:table 2.2: lower bounds} \mbox{Table 2.2: } <\mbox{U} + 957 \mbox{F} > <\mbox{U} + 6570 > <\mbox{U} + 636 \mbox{E} > <\mbox{U} + 4 \mbox{F} 8 \mbox{B} > <\mbox{U} + 6570 > <\mbox{U} + 636 \mbox{E} > <\mbox{E} > <\mbox{E}$

Sample_name	Gene_name	Expression
sample_1	gene_1	11
$sample_2$	gene_1	84
$sample_3$	gene_1	29
$sample_4$	${ m gene}_1$	67
$sample_5$	${\rm gene}_1$	81
$sample_1$	$gene_2$	61
$sample_2$	$gene_2$	100
$sample_3$	$gene_2$	5
$sample_4$	$gene_2$	15
$sample_5$	${\rm gene}_2$	73
$sample_1$	$gene_3$	65
$sample_2$	$gene_3$	82
$sample_3$	$gene_3$	39
$sample_4$	$gene_3$	88
$sample_5$	$gene_3$	92
$sample_1$	$gene_4$	83
$sample_2$	$gene_4$	56
$sample_3$	$gene_4$	80
$sample_4$	$gene_4$	31
$sample_5$	$gene_4$	25
$sample_1$	$gene_5$	85
${\rm sample}_2$	${\rm gene}_5$	89
$sample_3$	$gene_5$	35
$sample_4$	$gene_5$	2
$sample_5$	$gene_5$	9

Literature

Here is a review of existing methods.

Methods

We describe our methods in this chapter.

Applications

Some significant applications are demonstrated in this chapter.

- 5.1 Example one
- 5.2 Example two

Final Words

We have finished a nice book.