

2022-07-04



# Contents



# **Chapter 1**

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- 
- 2020
- 2020

## **1.1**

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- 
- 

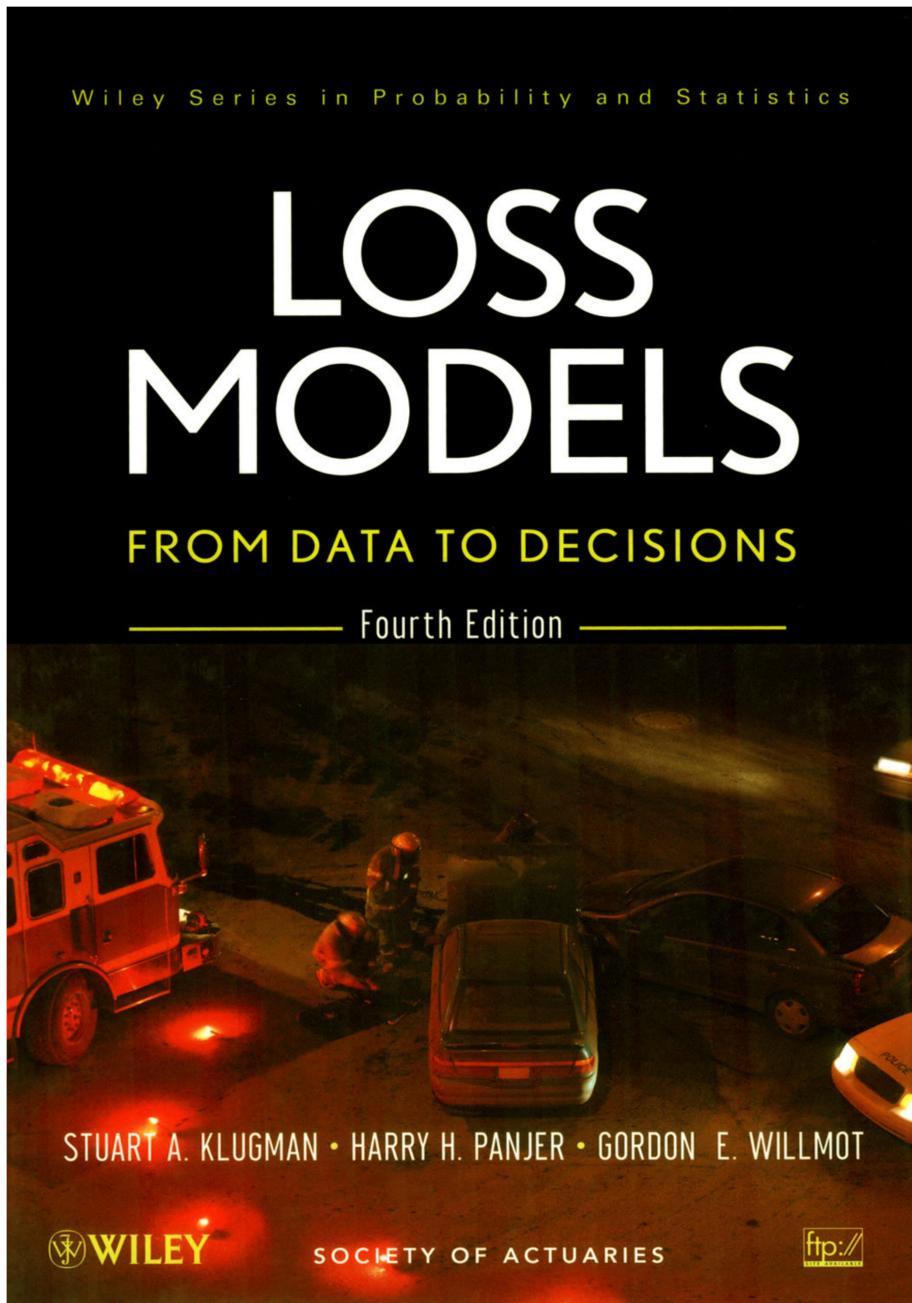
R

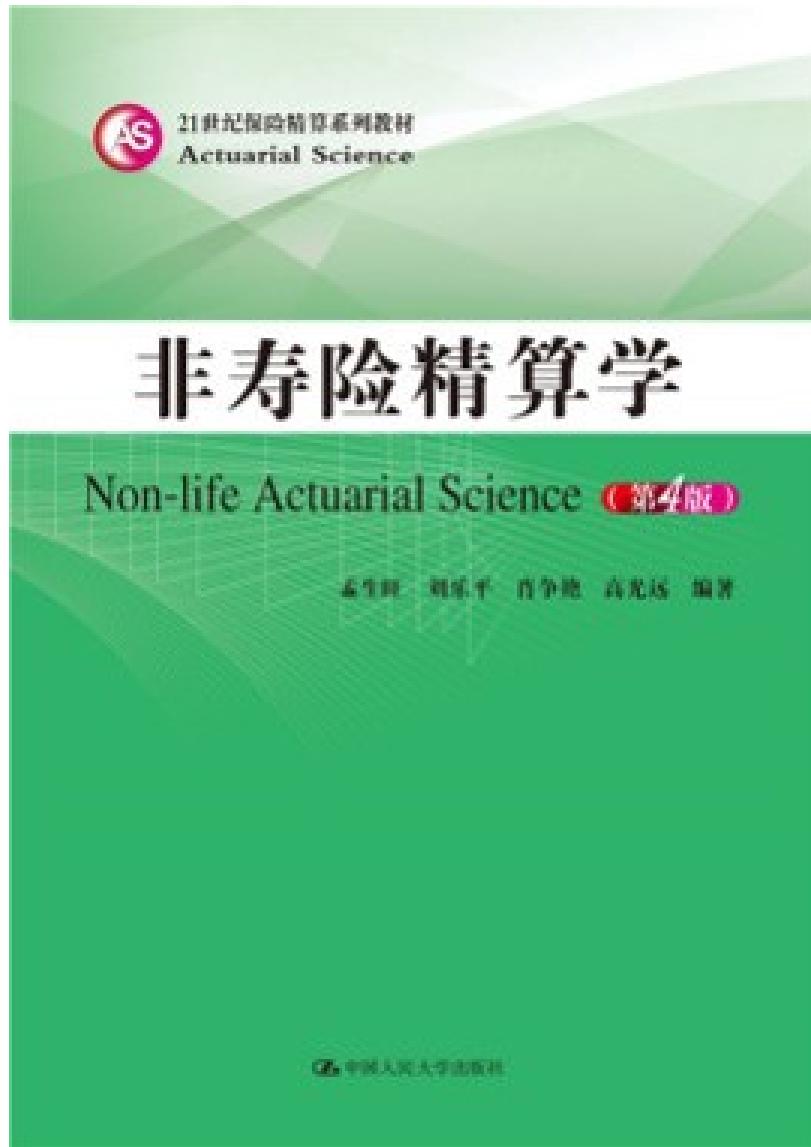
## **1.2**

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- 
- 
- 

### **1.3**

- Klugman S. A., Panjer H. H., Willmot G. E. *Loss models: from data to decisions* (5th edition). London: John Wiley & Sons, 2016





## 1.4 R rmarkdown

### 1.4.1 Rmarkdown

Rmarkdown R markdown rmarkdown markdown  
rmarkdown markdown R Markdown Rmd .Rmd  
HTML docx pdf beamer

R	rmarkdown	markdown
R markdown	—Typora	Rmarkdown
R		
markdown		
rmarkdown	html pdf	



# **Chapter 2**

## **R**

1

### **2.1**

1

#### **2.1.1 0-1**

1

#### **2.1.2**

1

#### **2.1.3**

1

#### **2.1.4**

1

**2.2****2.2.1****2.2.2****2.3**

# Chapter 3

3.1

- |  |     |                     |         |             |            |
|--|-----|---------------------|---------|-------------|------------|
|  | $X$ | $(0, +\infty)$      |         |             |            |
|  | $N$ | $0, 1, 2, 3, \dots$ |         | $0 \quad 1$ | $I = 0, 1$ |
|  | $S$ | $[0, +\infty$       | $S = 0$ |             | $S > 0$    |

## 3.2

- $X$  (Cumulative Distribution Function, cdf)

$$F_X(x) = \Pr(X \leq x)$$

: R

$$F_1(x) = \begin{cases} 0 & x < 0, \\ 0.01x & 0 \leq x < 100, \\ 1, & x \geq 100. \end{cases}$$

```
#  
F1.f <- function(x) {  
  if (x < 0){  
    out <- 0  
  } else if(x < 100 & x >= 0){  
    out <- 0.01*x  
  } else if (x >= 100){  
    out <- 1  
  }  
  return(out)  
}  
F1.f <- Vectorize(F1.f) #  
  
x <- seq(from = 0, to = 100, length.out = 20) #  
y <- F1.f(x) #  
plot(x, y, type = 'l', col = "blue", lwd = 2)
```