

:

$$S(x) = P(X \geq x)$$

. x

:

$$S(x) = 1 - F(x)$$

(F)

X

f

:

$$f(x) = -\frac{dS(x)}{dx}$$

$$S(x) = \int_x^{\infty} f(t)dt \quad : \quad (f)$$

$$S(x) = \sum_{x_i \geq x} P(x_i)$$

$$(x, x + \Delta x)$$

:

x

$$h(x) = \lim_{\Delta x \rightarrow 0} \frac{P[x \leq X < x + \Delta x | X \geq x]}{\Delta x}$$

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$$h(x) = \frac{f(x)}{S(x)} \quad X$$

¹ Survival Function
² Hazard Function

$$H(x) = \int_0^x h(u)du = -LnS(x)$$

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$$h(x_j) = P[X = x_j|X \geq x_j] = \frac{P(x_j)}{S(x_{j-1})}$$

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$$H(x) = \sum_{x_j \leq x} h(x_j)$$

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(C_r)

() x

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_____ .(

(C_l)

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³ Censoring
⁴ Right Censoring
⁵Left Censoring
⁶Interval Censoring

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(a , b)

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f(x)

S(Cr)

1-S(Cl)

⁷Truncation

⁸Left Truncation

⁹Right Truncation

$$[S(L_i)-S(R_i)]$$

$$f(x) / S(y) \hspace{10cm} y$$

$$f(y) / [1-S(y)]$$

$$:$$

$$L \propto \prod_{j \in D} f(x_j) \prod_{r \in R} S(C_r) \prod_{l \in L} (1-S(C_l)) \prod_{i \in I} [S(L_i)-S(R_i)]$$

$$\hspace{10cm} L \hspace{10cm} R \hspace{10cm} (\hspace{10cm}) \hspace{10cm} D$$

$$y \hspace{10cm} I$$

$$S\left(C\right)/S\left(y_i\right) \hspace{1cm} S(C) \hspace{1cm} f\left(x_i\right)/S\left(y_i\right) \hspace{1cm} f\left(x_i\right) \hspace{1cm} (\hspace{10cm})$$

$$:$$

$$.$$

$$L = \prod_{i \in D} f_i(x_i) \prod_{i \in R} S_i(C_r) \prod_{i \in L} (1-S_i(C_l)) \prod_{i \in I} [S_i(L_i)-S_i(R_i)]$$