ECON_7201 APPLIED ECONOMETRICS ASSIGNMENT 1

1 GIT AND GIT HUB

I have created the repository and pushed all the changes to my repository on github.com (https://github.com/Emmanuel-spec493/econ_3201)

2 LATEX

(a) $E(\mathrm{Y}) = y_1p_1 + \ldots + y_kp_k = \sum_{i=1}^{k} y_ip_i$

(b) σ_y =Var(Y) =E[(Y-μ_y)^2] =$\sum_{i=1}^{k}(y_i - \mu_y)^2p_i$

(c) $\hat{\beta}$ =$\frac{\sum_{i=1}^{n}(y-y_i)(x-x_i)}{\sum_{i=1}^{n}(x-x_i)^2}$

(d) P($a \leq Y \leq b$) = $\int_a^b$ fY $(y)dy$

(e) $\hat{g}$(x) = $\frac{\frac{1}{nh}\sum_{i=1}^{n} y_i k(\frac{x_i-x}{h})}{\frac{1}{nh}\sum_{i=1}^{n} k(\frac{x_i-x}{h})}$

3.1 R

(a) n <- 1000

k <- n/2

(b) u1 <- runif(k, min = 0, max = 1)

u2 <- runif(k, min =0, max = 1)

(c)z1 <- sqrt(-2*log(u1))* cos(2*pi*u2)

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  z2 <- sqrt(-2*log(u1))* sin(2*pi*u2)


z <- c(z1,z2)
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mean (x)

read.csv("hlthexp.csv")

3.2

(a) There is no missing values for Hospitals .

sum(is.na(df$Hospitals)) [1] 0