

# Análise de resíduos para o modelo gama

Prof. Caio Azevedo

# Estudo de simulação de resíduos

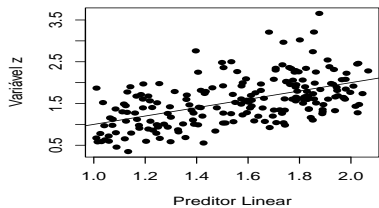
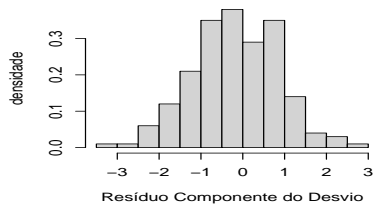
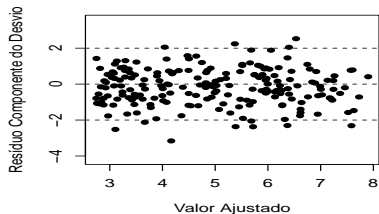
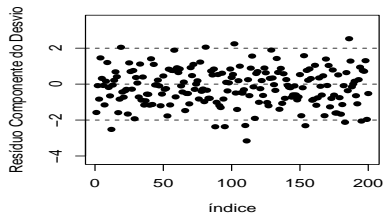
- Para os modelos de 1 a 3,  $\mu_i = e^{1+1,2x_i}$ ,  $x_i \stackrel{i.i.d.}{\sim} U(0, 1)$ ,  $\phi = 5$ ,  $i=1,2,\dots,n$ ,  $n = 200$ .
- Para os modelos 4 e 5,  $\mu_i = e^{3+1,1x_i}$  (restante igual).
- Modelo 1:  $Y_i \stackrel{ind.}{\sim} \text{gama}(\mu_i, \phi)$  (simulado e ajustado).
- Modelo 2:  $Y_i \stackrel{ind.}{\sim} \text{gama}(\mu_i, \phi_i)$ ,  $\phi_i = \exp(3x_i)$  (simulado); Modelo 1 (ajustado).

# Estudo de simulação de resíduos

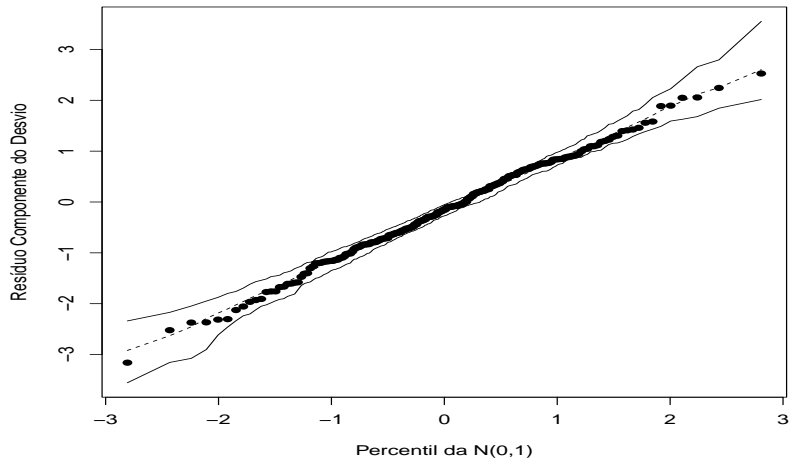
- Modelo 3:  $Y_i \stackrel{ind.}{\sim} \text{gama}(\mu_i, \phi)$  (simulado); Modelo 1, com  $\mu_i = \eta_i$  (ajustado).
- Modelo 4:  $Y_i \stackrel{ind.}{\sim} NA(\mu_i, \phi, -0, 20)$  (simulado); Modelo 1 (ajustado).
- Modelo 5:  $Y_i \stackrel{ind.}{\sim} TA(\mu_i, \phi, -0, 20, 3)$  (simulado); Modelo 1 (ajustado).

$NA(\mu, \phi, \lambda)$  e  $TA(\mu, \phi, \lambda, \nu)$  representam, respectivamente, a distribuição normal assimétrica e t de Student assimétrica com parâmetro de localização  $\mu$ , de dispersão  $\psi$ , de assimetria  $\lambda$  e graus de liberdade  $\nu$ .

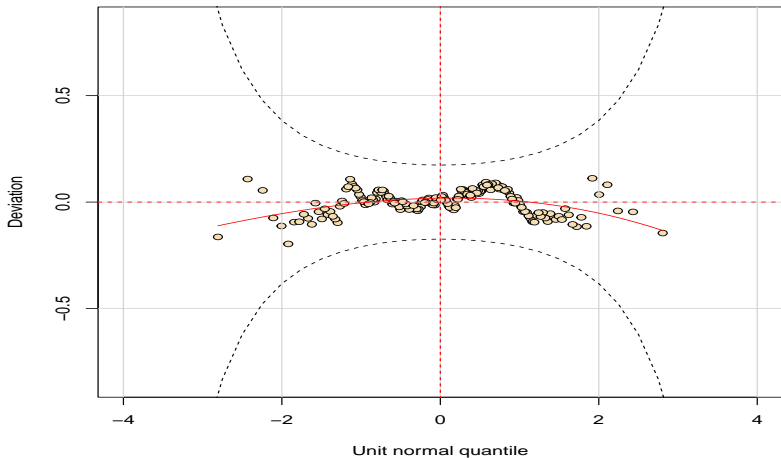
# Modelo 1: gráficos de diagnóstico



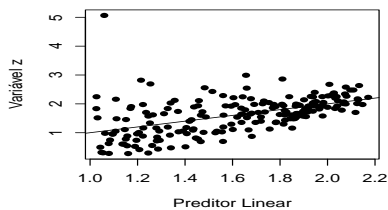
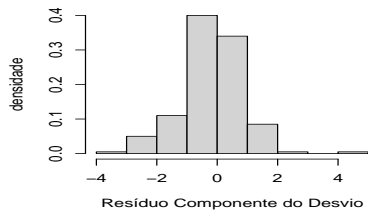
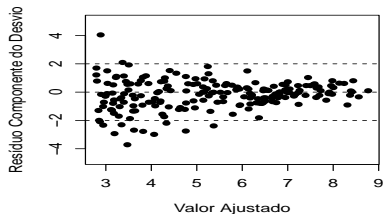
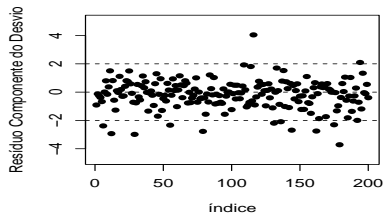
# Modelo 1: gráficos de envelope



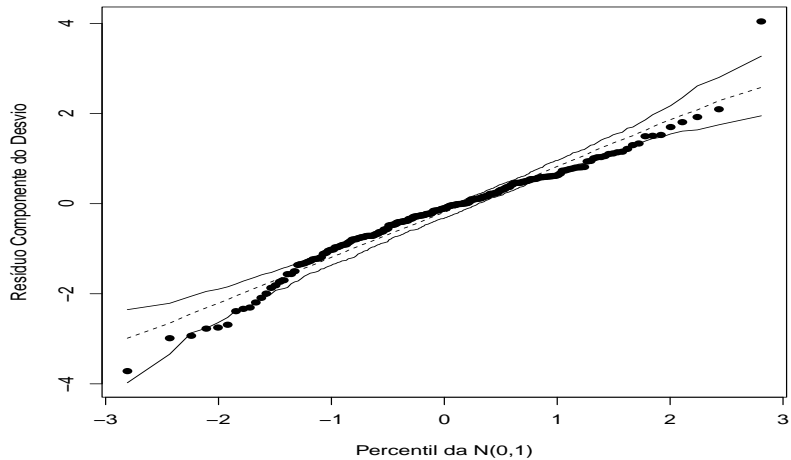
# Modelo 1: worm plot



# Modelo 2: gráficos de diagnóstico

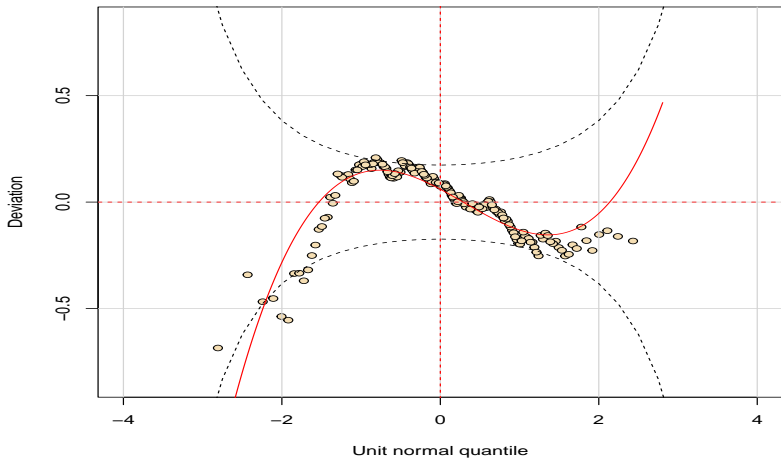


## Modelo 2: gráficos de envelope

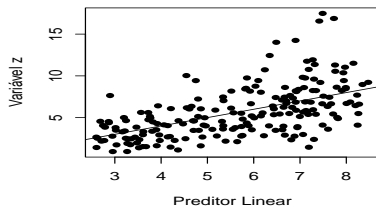
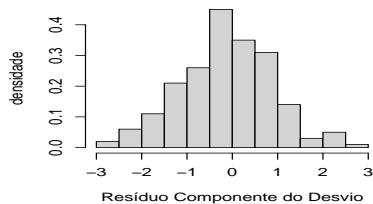
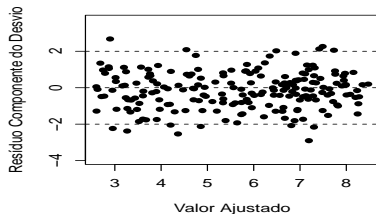
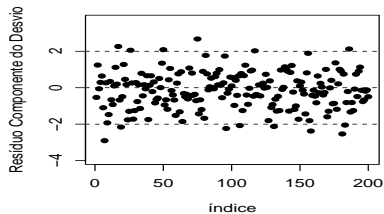




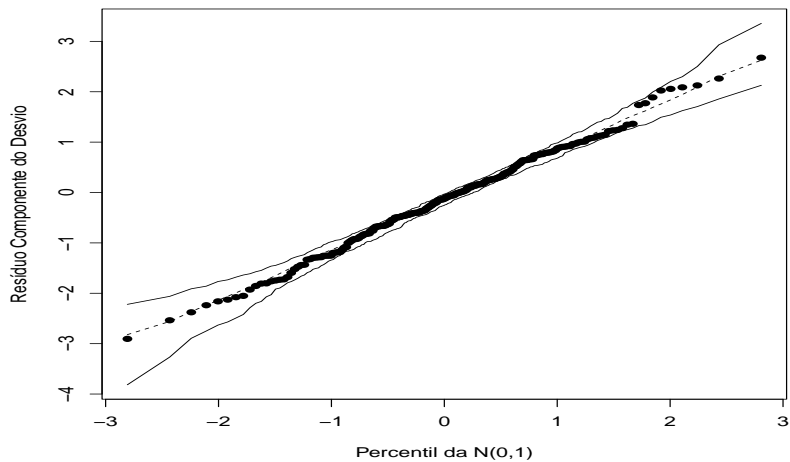
## Modelo 2: worm plot



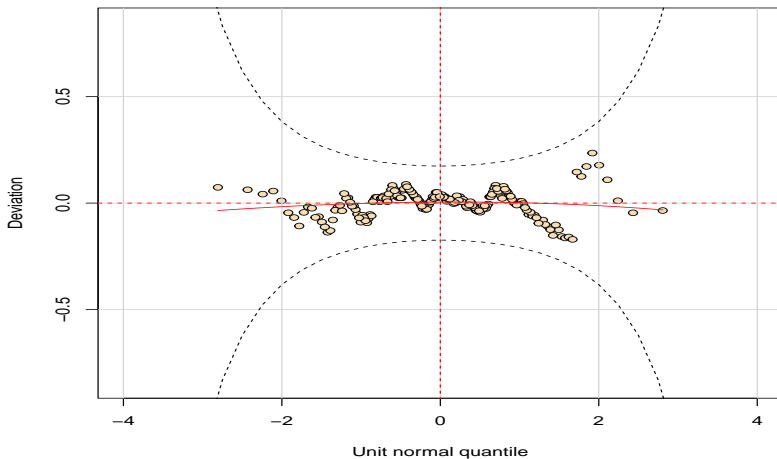
# Modelo 3: gráficos de diagnóstico



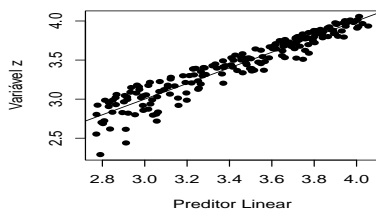
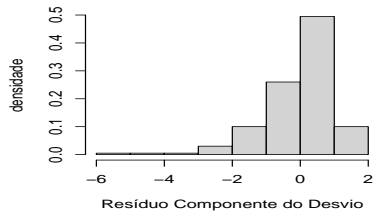
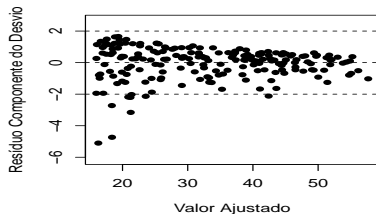
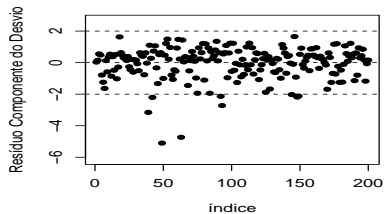
## Modelo 3: gráficos de envelope



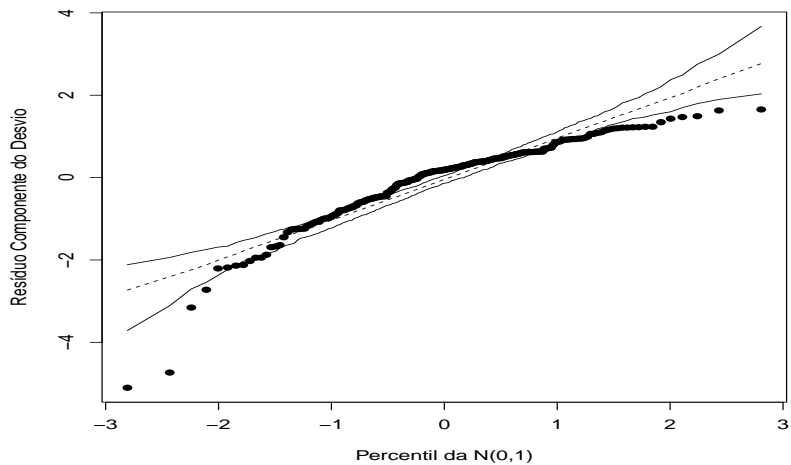
# Modelo 3: worm plot



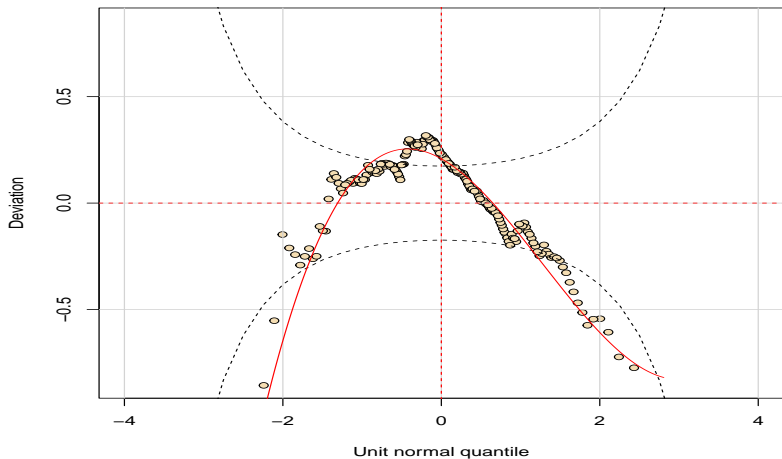
# Modelo 4: gráficos de diagnóstico



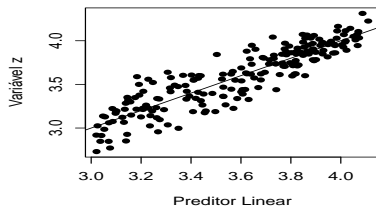
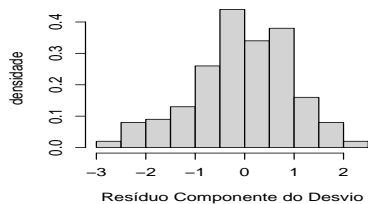
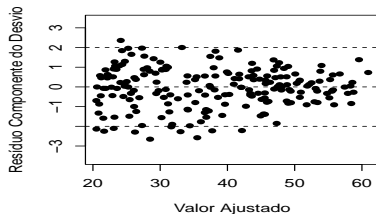
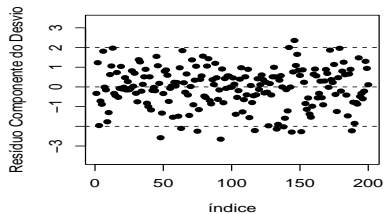
## Modelo 4: gráficos de envelope



## Modelo 4: worm plot

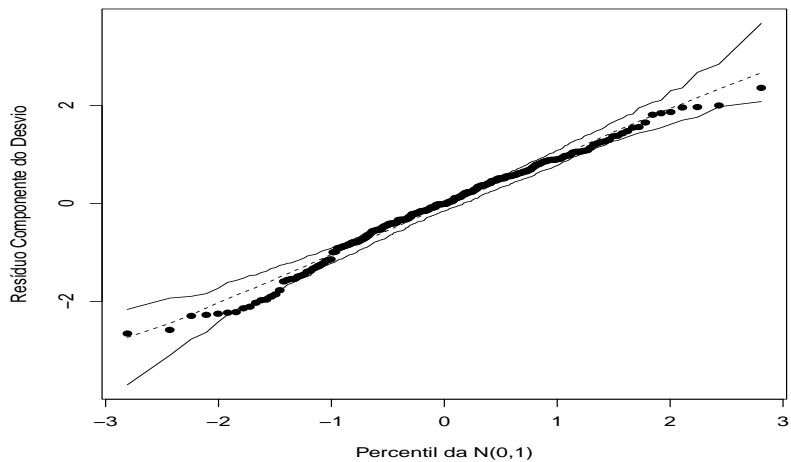


# Modelo 5: gráficos de diagnóstico





## Modelo 5: gráficos de envelope



# Modelo 5: worm plot

