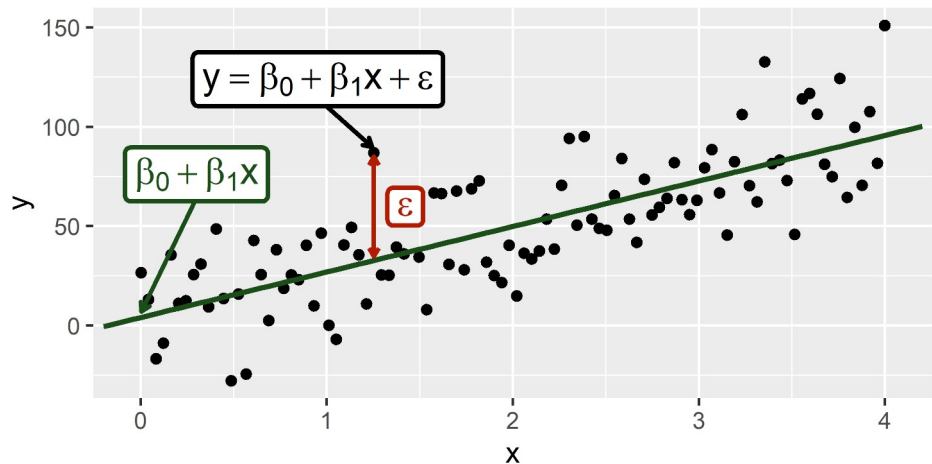


Regressão linear e multilinear

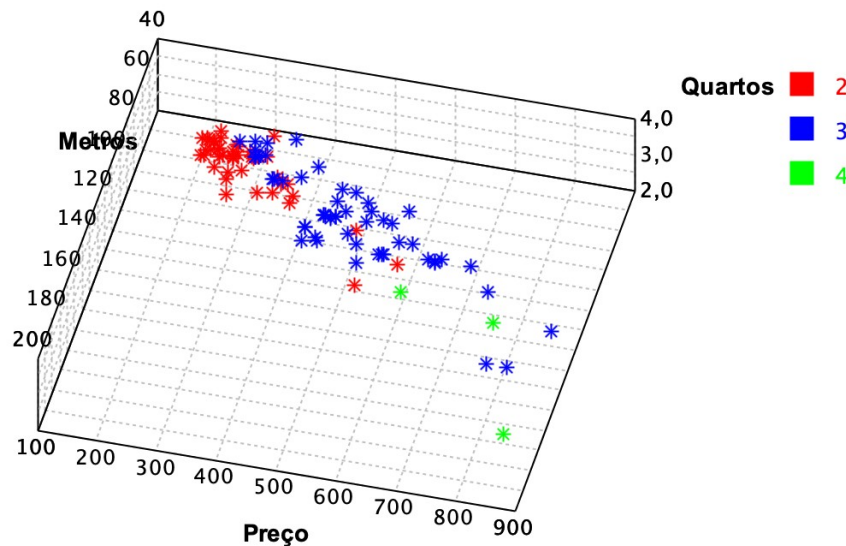
Modelo de regressão linear simples



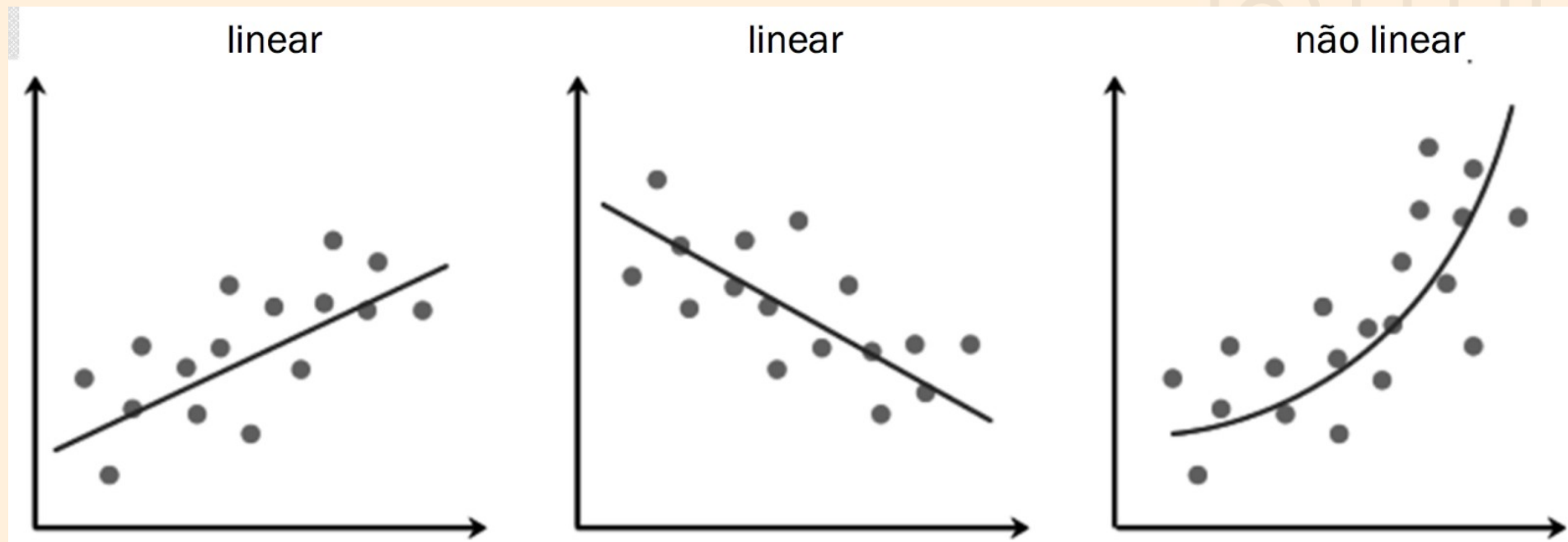
Elaboração: analisemacro.com.br

$$y = f(x)$$

Aptos de SBC: Metros vs Valor vs Quartos



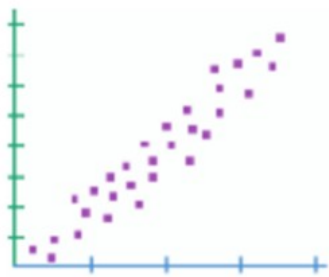
$$y = f(x_1, x_2, \dots, x_N)$$



Coeficiente de correlação de Pearson



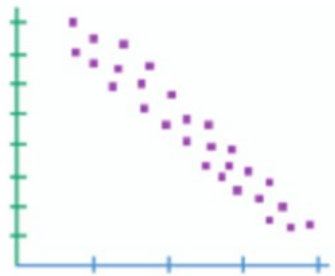
Sem
correlação



Correlação
positiva forte



Correlação
positiva fraca



Correlação
negativa forte

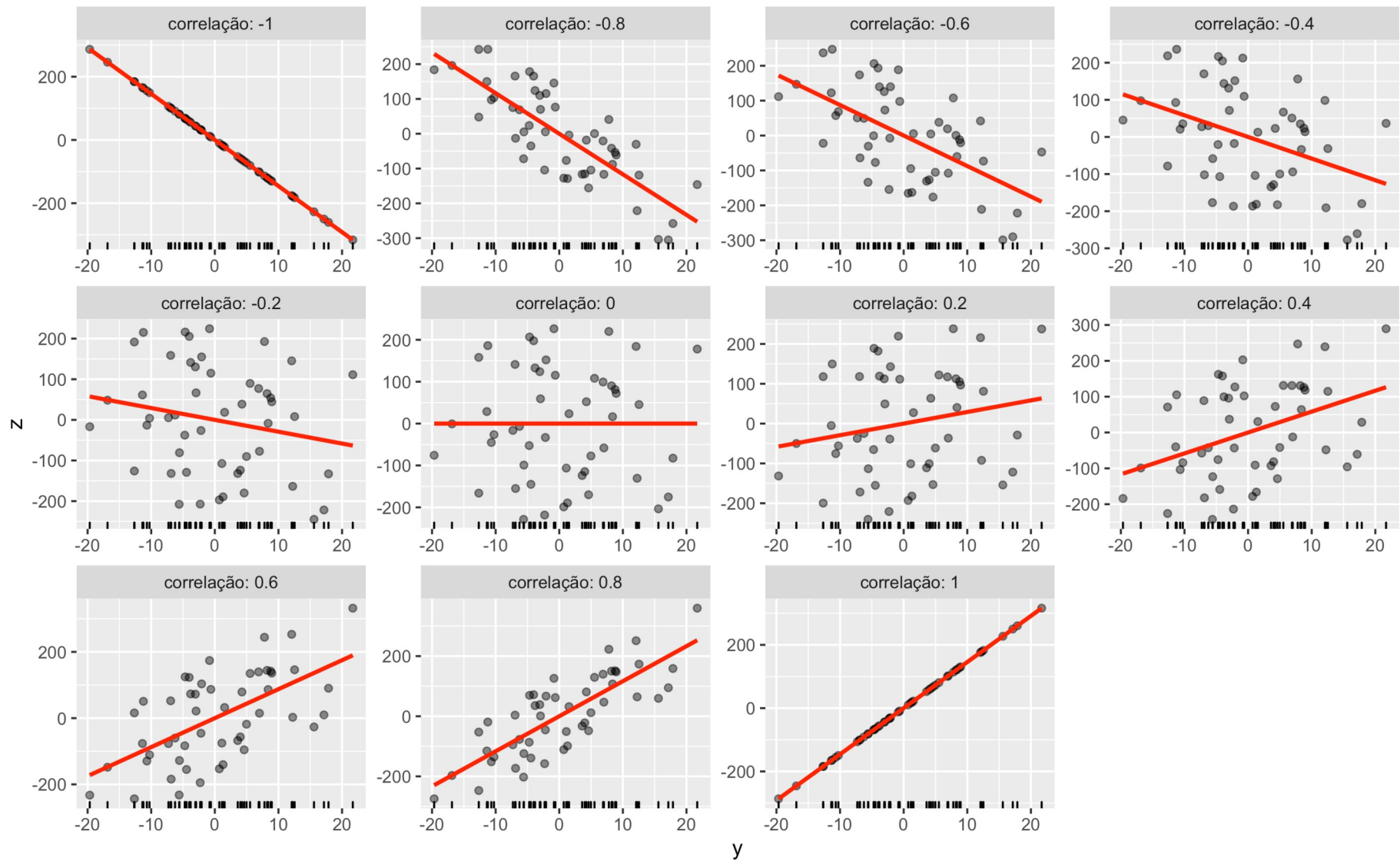


Correlação
negativa fraca

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

OU

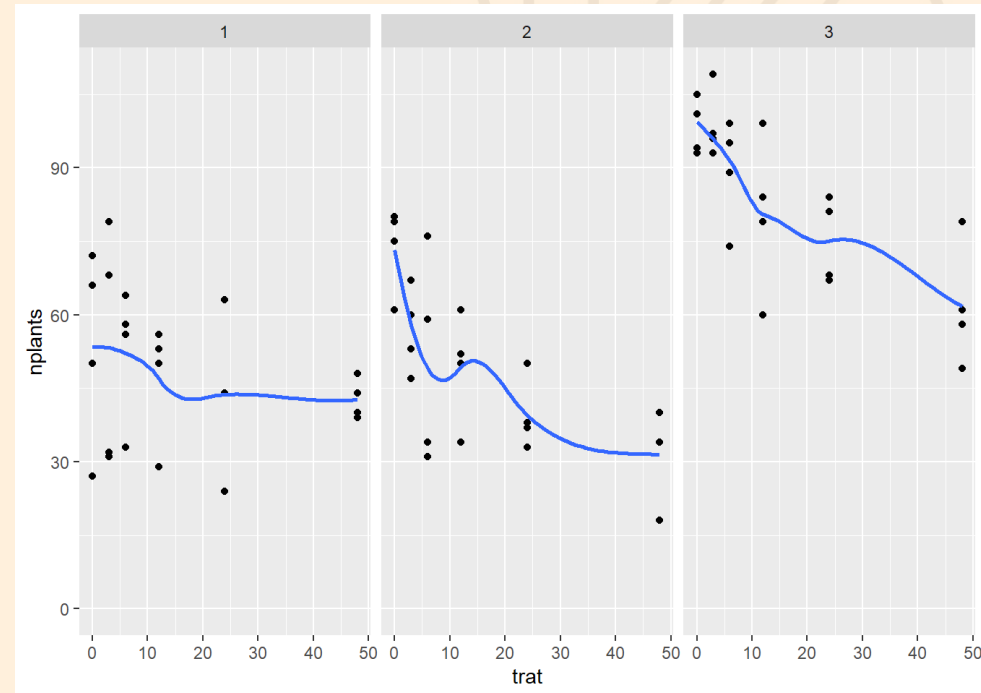
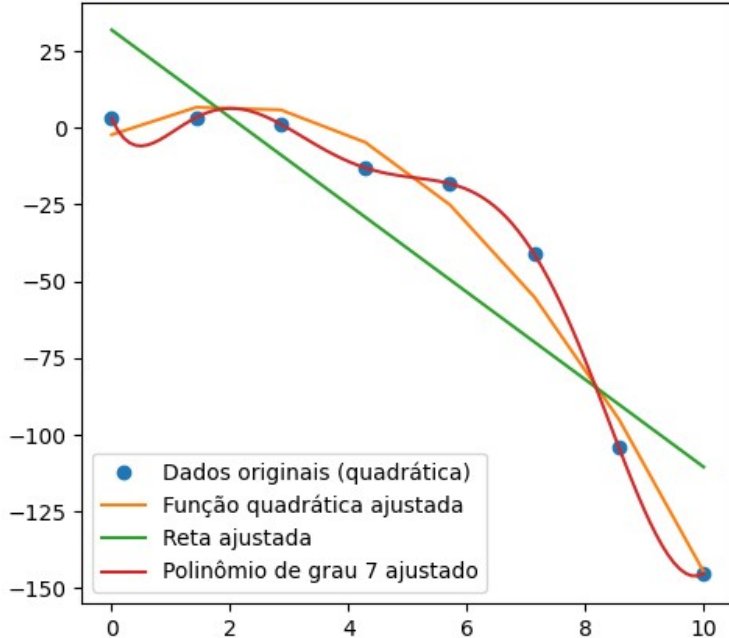
$$r = \frac{\sum_{i=1}^n ((x_i - \bar{x})(y_i - \bar{y}))}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$



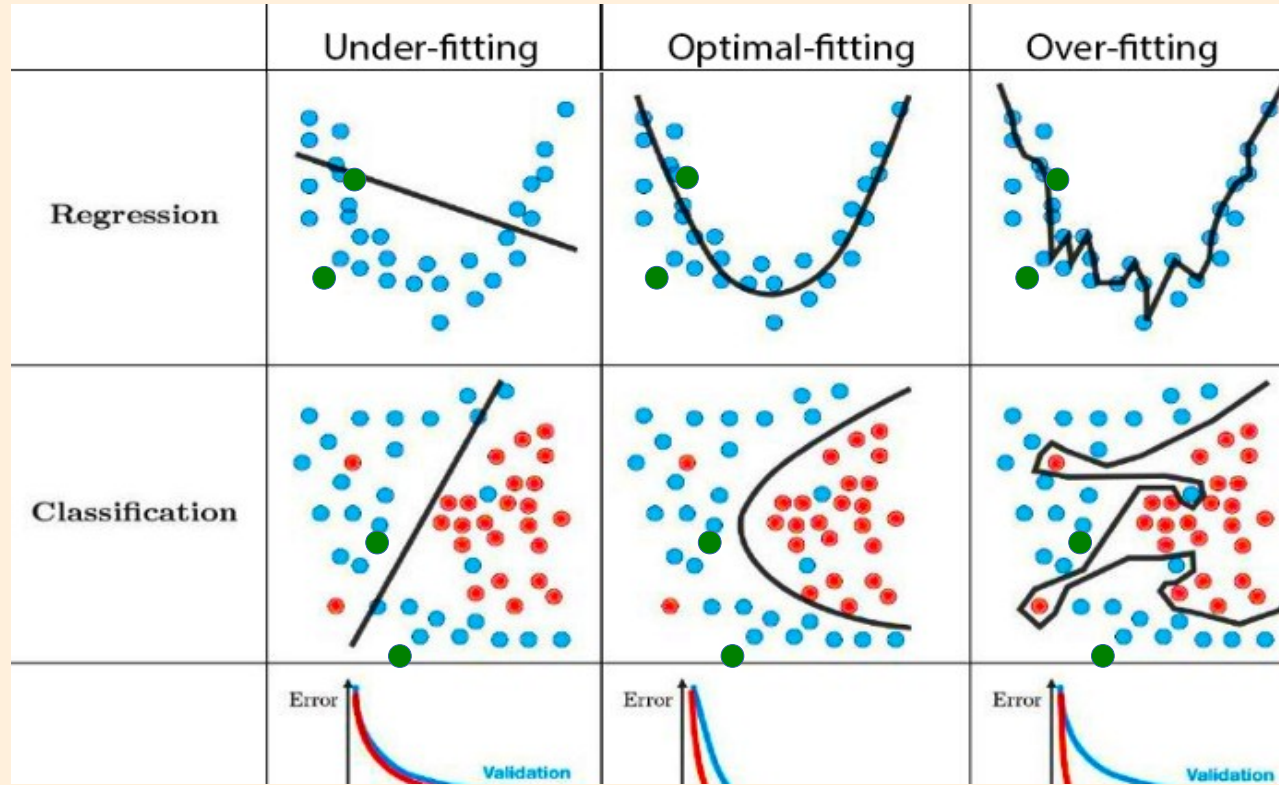
Regressão não-linear

ajuste de funções

Overfitting (sobreajuste)



Ajustes do modelo



- Treinam – classe A
- Treinam – classe B
- Teste / “novo” dado

Superajuste (overfitting)
ex.

- 95% de acerto para os dados de treinamento
- 70% de acerto para os dados de teste