

Qualitätsmaße für numerische Vorhersagen (2)

Mean-squared error

$$\frac{(p_1 - a_1)^2 + \dots + (p_n - a_n)^2}{n}$$

Root mean-squared error

$$\sqrt{\frac{(p_1 - a_1)^2 + \dots + (p_n - a_n)^2}{n}}$$

Mean-absolute error

$$\frac{|p_1 - a_1| + \dots + |p_n - a_n|}{n}$$

Relative-squared error*

$$\frac{(p_1 - a_1)^2 + \dots + (p_n - a_n)^2}{(a_1 - \bar{a})^2 + \dots + (a_n - \bar{a})^2}$$

Root relative-squared error*

$$\sqrt{\frac{(p_1 - a_1)^2 + \dots + (p_n - a_n)^2}{(a_1 - \bar{a})^2 + \dots + (a_n - \bar{a})^2}}$$

Relative-absolute error*

$$\frac{|p_1 - a_1| + \dots + |p_n - a_n|}{|a_1 - \bar{a}| + \dots + |a_n - \bar{a}|}$$

Correlation coefficient**

$$\frac{S_{PA}}{\sqrt{S_P S_A}}, \text{ mit } S_{PA} = \frac{\sum_i (p_i - \bar{p})(a_i - \bar{a})}{n - 1},$$

$$S_P = \frac{\sum_i (p_i - \bar{p})^2}{n - 1}, S_A = \frac{\sum_i (a_i - \bar{a})^2}{n - 1}$$

* \bar{a} ist Mittelwert des Trainingsdatenbestands.

** \bar{a} ist Mittelwert des Testdatenbestands.