

Machine Learning Methods in the Environmental Sciences

Errata

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Chapter 2

p.34, line after Eq.(2.39), “ $\mathbf{e}_j(t)$ ” should be “ \mathbf{e}_j ”.

p.44, 5th line from bottom: change “four disadvantages” to “three disadvantages”.

p.46, delete item (4), “Less variance explained ...”.

Chapter 8

p.188, line after Eq.(8.69) should read:
with the worst FAR score being 1 and the best score being 0.

p.189, first line should read:
with the worst F score being 1 and the best score being 0.

Chapter 12

Exercise 12.3 should be replaced by:

12.3 Suppose the observed predictand y_d is modelled by the linear regression relation $y = ax$, where x is the predictor, and the variables x and y_d have been scaled to have zero mean and unit variance. Suppose the observed predictand is given by $y_d = ax + \epsilon$, where ϵ is Gaussian noise with standard deviation σ . To inflate the variance of y to match the observed variance, we introduce an inflated predictand

$$\tilde{y} = \sqrt{\frac{\text{var}(y_d)}{\text{var}(y)}} y.$$

Show that $\text{var}(\tilde{y} - y_d) > \text{var}(y - y_d)$ (i.e. the MSE has increased from inflating the predictand).