✅ Quiz M4.04

Question

Which of the following estimators can solve linear regression problems?

- a) sklearn.linear_model.LinearRegression
- b) sklearn.linear_model.LogisticRegression
- c) sklearn.linear_model.Ridge

Select all answers that apply

Question

Regularization allows:

- a) to create a model robust to outliers (samples that differ widely from other observations)
- b) to reduce overfitting by forcing the weights to stay close to zero
- c) to reduce underfitting by making the problem linearly separable

Select a single answer

Question

A ridge model is:

- a) the same as linear regression with penalized weights
- b) the same as logistic regression with penalized weights
- c) a linear model
- d) a non linear model

Select all answers that apply

Question

Assume that a data scientist has prepared a train/test split and plans to use the test for the final evaluation of a `Ridge` model. The parameter `alpha` of the `Ridge` model:

- a) is internally tuned when calling `fit` on the train set
- b) should be tuned by running cross-validation on a **train set**
- c) should be tuned by running cross-validation on a **test set**
- d) must be a positive number

Select all answers that apply

Question

Scaling the data before fitting a model:

- a) is often useful for regularized linear models
- b) is always necessary for regularized linear models
- c) may speed-up fitting
- d) has no impact on the optimal choice of the value of a regularization parameter

Select all answers that apply

Question

The effect of increasing the regularization strength in a ridge model is to:

- a) shrink all weights towards zero
- b) make all weights equal
- c) set a subset of the weights to exactly zero
- d) constrain all the weights to be positive

Select all answers that apply