

scikit-learn seminar

1.1.4. Elastic Net

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ElasticNet

- a linear model trained with L1 and L2 prior as regularizer

L1 regularization: Lasso ($|\theta|$)

L2 regularization: Ridge ($|\theta|^2$)

- the objective function:

$$\min_w \frac{1}{2n_{samples}} \|Xw - y\|_2^2 + \alpha\rho \|w\|_1 + \frac{\alpha(1-\rho)}{2} \|w\|_2^2$$

Combination of L1 and L2

- allow for learning a sparse model while still maintaining the regularization properties of *Ridge*.
 - control this tradeoff using the L1_ratio parameter
 - on the python...
 - ElasticNetCV** can be used set the parameters alpha and rho by cross-validation.