

Exploring scikit-learn

Following the examples discussed during the webinar try to obtain the best fit to the generative model. Focus on using the V-matrix technique to propose a non-linear model and ridge regression. Try to modify the model, number of experimental points and the level of noise. The report should come together with a jupyter notebook. In the report describe in detail the whole procedure and the things you tried to get the best fit. The solutions should be provided via confluence.

V-matrix technique

V -matrix technique is a method which captures some geometric properties of the data (that are ignored by classical statistical methods). In order to consider the explicit form of the functional for solving our inference problems, we specify expressions for the squared distance and regularization functional in expression.

Ridge regression

Ridge Regression is a technique for analyzing multiple regression data that suffer from multicollinearity. In other words it is?a method of estimating the coefficients of multiple-regression models in scenarios where independent variables are highly correlated. It is commonly used in many fields including econometrics, chemistry, and engineering.

Bibliography:

https://en.wikipedia.org/wiki/Polynomial#Polynomial_functions

https://ncss-wpengine.netdna-ssl.com/wp-content/themes/ncss/pdf/Procedures/NCSS/Ridge_Regression.pdf