Machine Learning

FYS-STK 4155

Project 1

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Introduction

In this project bla bla bla

Theory

Linear regression something

Sampling methods

We are studying several methods within the field of linear regression.

Ordinary Least Square

$$\hat{y} = \hat{X}\hat{\beta} + \epsilon \tag{1}$$

$$\hat{\beta} = (\mathbf{X}^\top \mathbf{X})^{-1} \mathbf{X}^\top \mathbf{Y} \tag{2}$$

Ridge Regression

$$\hat{y} = \hat{X}\hat{\beta} + \epsilon \tag{3}$$

$$\hat{\beta} = (\mathbf{X}^\top \mathbf{X} + \lambda \mathbf{I}_{pp})^{-1} \mathbf{X}^\top \mathbf{Y} \tag{4}$$

Lasso Regression

Resampling method

Bootstrap

Evaluate some statistical estimates

Results

Hope I get some results...

Discussion

..to discuss.