

Homework 1

Description

Please solve the following problems from the exercise sheet.

1. Interpreting Lasso Regularization Paths
2. Cross-Validation for Lasso
3. Prediction Stability Plots
4. Kernels and GP Samples

Submission Details

Upload your solution to canvas as a PDF, HTML, or MS Word document. Include all relevant figures within your explanations. Include all relevant code. You may use either R or python.

Rubric

Evaluation Criteria

Technical accuracy: Definitions used correctly, claims stated precisely.

Completeness: Assertions grounded in readings, lectures, or original code.

Clarity: Well-formatted, grammatically correct prose (not bullet fragments). No wordiness.

Code quality: Modular functions, meaningful variable names.

Point Allocations

Problem 1 [Interpreting Lasso Regularization]: 4 points

(a) 1, (b) 1, (c) 1, (d) 1

Problem 2 [Cross-Validation for the Lasso]: 4 points

(a) 1.5, (b) 1.5, (c) 1

Problem 3 [Prediction Stability Plots]: 6 points

(a) 1, (b) 1, (c) 2, (d) 2

Problem 4 [Kernels and GP Samples]: 6 points

(a) 2, (b) 2, (c) 2