

CSwR22 Group2 Bivariate Smoothing

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Introduction

Bivariate smoothing

Objectives

- ▶ Implement a smoothing spline smoother using LOOCV for selecting the tuning parameter λ
- ▶ Test the accuracy of the implementation
- ▶ Compare the results with `smooth.spline`
- ▶ Code improvement
- ▶ Benchmarking
- ▶ Bottlenecks (profiling)
- ▶ Test the implementation with real data and simulated data
- ▶ Utilizing matrix decomposition in combination with LOOCV

Theory

Leave one out cross validation

Benchmarking

```
[1] "Hello world"
```