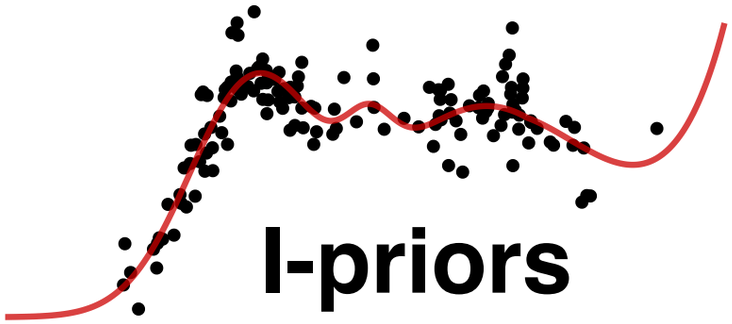
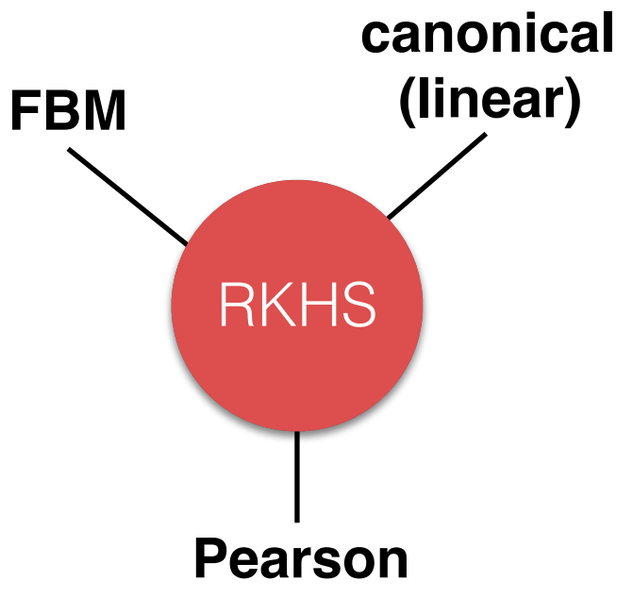


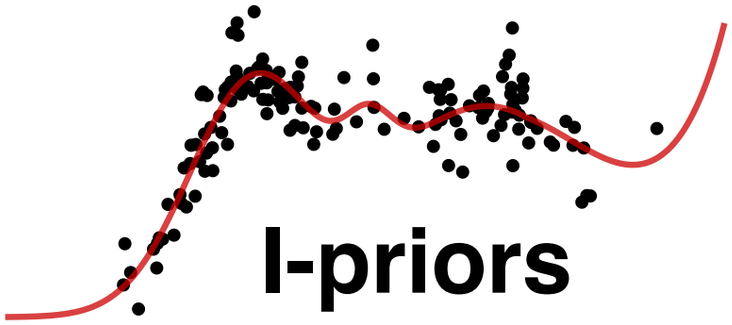
I-priors



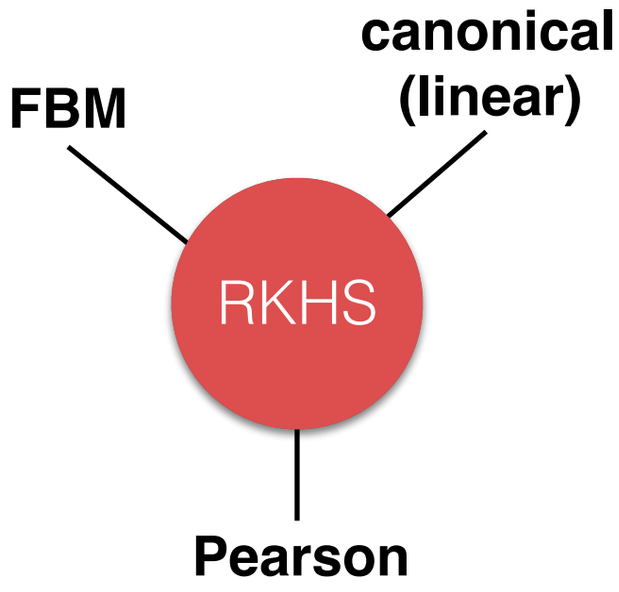
Unified methodology for
- additive models
- multilevel models
- models with functional covariates

<u>Advantages</u>

- Minimal assumptions
- Straightforward inference
- Performance competetive



I-priors



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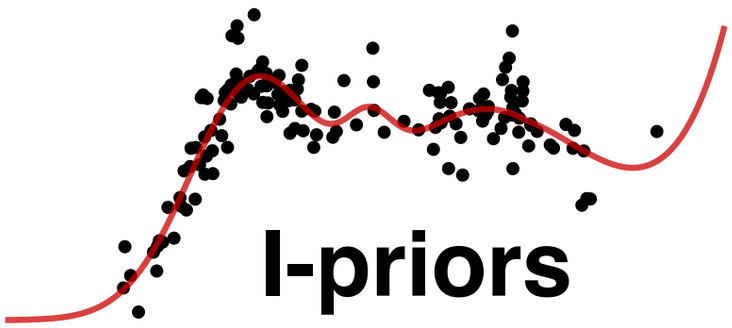
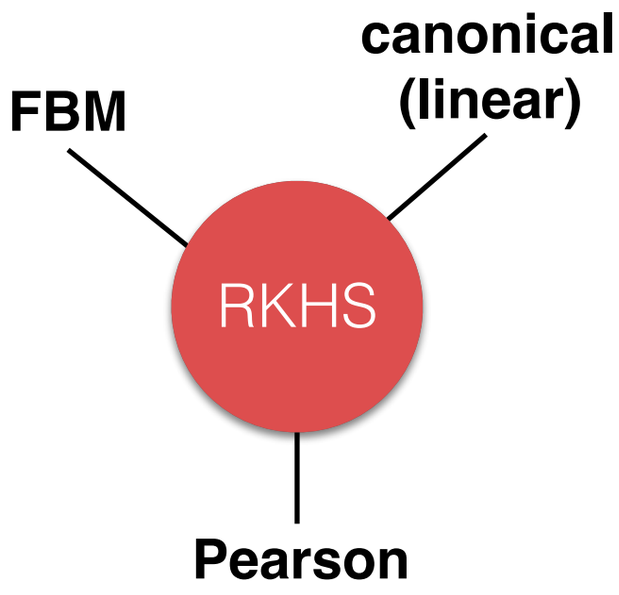
`R/iprior`

Estimation:
- Direct maximisation
- **<u>EM algorithm</u>**
- MCMC (Gibbs/HMC)



I-priors



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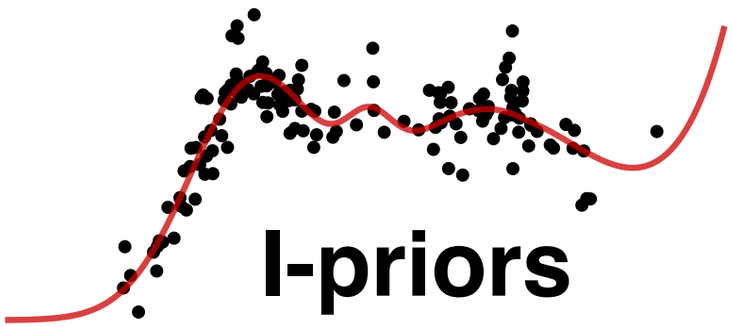
Bayesian Variable Selection

(using I-priors in the canonical RKHS)

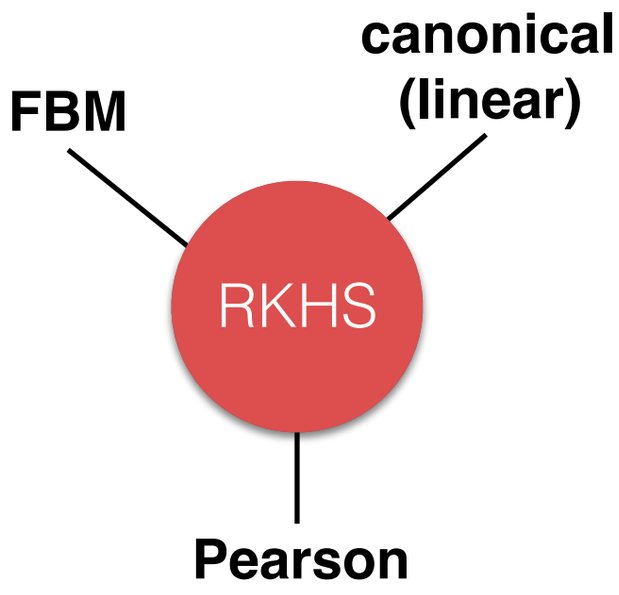
✓ ✓ ✗ ✗ ✓

X_1 X_2 X_3 X_4 X_5

Good performance in cases with multicollinearity



I-priors



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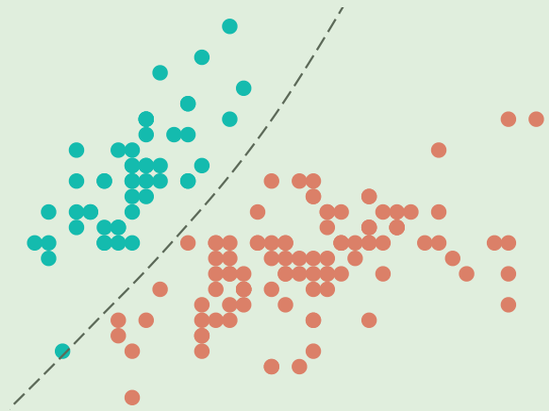
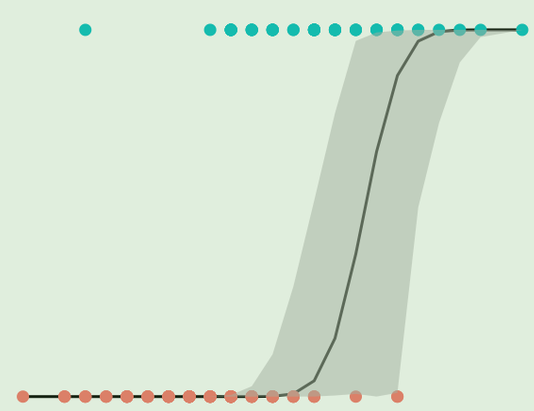
Binary probit models with I-priors

Extension to binary responses
Estimation using variational inference



classification



inference / fitted probabilities