Learning with Transformation Invariant Kernels

Christian Walder[1] and Olivier Chapelle[2]   -   Poster M40

Gaussian kernel SVM:

TWO PARAMETERS: length scale & noise parameter

Thin-plate kernel SVM: (new)

ONE PARAMETER: length scale = noise parameter

The joy of invariance - only one free parameter!

They perform equally well in practice!

We also derive basic results for

invariant and *conditionally* positive definite kernels.

[1] Max Planck Institute, Tübingen, Germany.
[2] Yahoo! Research, Santa Clara, CA.