

Pattern recognition and machine learning

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1 Chapters

1.1 Introduction

1.2 Probability distributions

1.3 Linear models for regression

1.4 Linear models for classification

1.5 Neural networks

1.6 Kernel methods

1.7 Sparse kernel machines

1.8 Graphical models

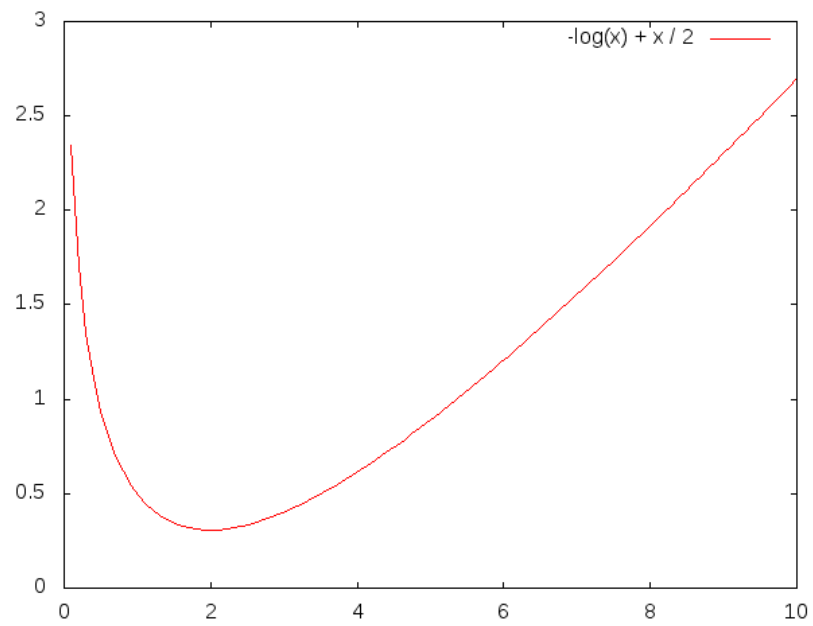
1.9 Mixture models and EM

1.10 Approximate inference

1.10.1 Variational inference

Exercise. Find α such that the uniform distribution on $[0, \alpha]$ has smallest Kullback-Leibler divergence from the exponential distribution with parameter $\lambda = 1$.

Compute the integral (10.3), to end up with a KL divergence of $-\ln(\alpha) + \frac{1}{2}\alpha$.



1.11 Sampling methods

1.12 Continuous latent variables

1.13 Sequential data

1.14 Combining models