Conferencia invitada

Fast Sparse Gaussian Process Methods:

The Informative Vector Machine

por

Dr. Neil Lawrence
Senior Research Fellow, University of Manchester

Abstract:

Gaussian processes are a non parametric approach to learning regression models. In this talk we will given a brief review of the use of Gaussian processes for regression. We will then introduce the informative vector machine approach to learning Gaussian processes for Classification on large scale data sets. We will show extensions of the method including multi-task learning, semi-supervised learning and learning invariances.

Related papers:

[1] N. D. Lawrence and M. I. Jordan. (2006) "Gaussian processes and the null-category noise model" in O. Chapelle, B. Schölkopf and A. Zien (eds) Semi-supervised Learning, MIT Press, Cambridge, MA.

[2] N. D. Lawrence, J. C. Platt and M. I. Jordan. (2005) "Extensions of the informative vector machine" in J. Winkler, N. D. Lawrence and M. Niranjan (eds) Deterministic and Statistical Methods in Machine Learning, Springer-Verlag, Berlin.

[3] N. D. Lawrence, M. Seeger and R. Herbrich. (2003) "Fast sparse Gaussian process methods: the informative vector machine" in S. Becker, S. Thrun and K. Obermayer (eds) Advances in Neural Information Processing Systems, MIT Press, Cambridge, MA.

Biography:

Neil Lawrence is a Senior Research Fellow in the School of Computer Science at the University of Manchester, U.K.. Previous to this appointment he was a Senior Lecturer in the Department of Computer Science at the University of Sheffield, U.K. where he was head of the Machine Learning Research Group. His main research interest is machine learning through probabilistic models. He

is interested in both the algorithmic side of these models and their application in areas such as bioinformatics, speech, vision and graphics.

His PhD was awarded in 2000 from the Computer Lab at the University of Cambridge. He then spent a year at Microsoft Research, Cambridge before moving to Sheffield in 2001 and then to Manchester in 2007.

Día: 3 de julio de 2007
Hora: 16:00
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