FACULTAD DE CIENCIAS
FÍSICAS Y MATEMÁTICAS
UNIVERSIDAD DE CHILE

CMM
Center for
Mathematical
Modeling

cmm.uchile.cl

Beauchef 851, edificio norte, piso 7
Santiago, CHILE
CP 837 0456

tel +56 2 2978 4870

Seminario de Aprendizaje de Máquinas

Expositor

Karim Pichara
PUC

Título

Variational Inference

Abstract:

Bayesian methods have shown to be very successful and attractive approaches in Machine Learning, thanks to the natural representation of uncertainty in real problems, the automatic control of overfitting, and the intuitive modeling of semantics through the use of latent variables and graphical models. In most cases, Bayesian approaches have to deal with the inference of posterior probabilities of latent variables given data, in order to make predictions for future cases or to perform model selection as well. Unfortunately, in most of the real cases, the estimation of those posteriors is intractable, forcing us to use approximate inference methods. In this talk, we will learn about Variational Inference, a very powerful tool that cast posterior approximations as an optimization problem, where simpler families of distributions are used to approximate true posteriors through the optimization of a lower bound on the marginal likelihood. We will explore the basics on Variational Inference, we will see some real applications, what are the main limitations today, and what is the focus of future research in this field.

Cuándo: 2/12/16, 14:30hrs

Dónde: Sala John von Neumann, CMM (Beauchef 851, torre norte, piso 7).

CONICYT
Ministerio de Educación

cnrs