

Tesine Implementative

- Implementazione di uno degli algoritmi visti o citati a lezione, ad esempio
 - Calcolo della probabilità di una query data un'evidenza sulla base della definizione
 - Stochastic Simulation
 - Belief propagation su factor graphs
 - Algoritmo che restituisca le indipendenze in una rete bayesiana o di markov
 - Variable elimination

2

Proposte di tesine

Tesine Bibliografiche

- Scegliere un articolo e scriverne un sunto di 4 pagine
 - Alcune proposte di articoli
- [Ven04] J. Vennekens, S. Verbaeten, M. Bruynooghe: Logic Programs with Annotated Disjunctions. ICLP, 2004
- [Rig07] F. Riguzzi. A top down interpreter for LPAD and CP-logic. AI*IA, 2007
- [Jaa96] T. Jaakkola, M. I. Jordan: Computing upper and lower bounds on likelihoods in intractable networks. UAI, 1996
- [Poo03a] D. Poole: First-order probabilistic inference. IJCAI, 2003
- [Sin08] P. Singla, P. Domingos: Lifted First-Order Belief Propagation. AAAI, 2008

Proposte di Articoli

- [Zha96] N. L. Zhang, D. Poole: Exploiting Causal Independence in Bayesian Network Inference. J. Artif. Intell. Res. 5, 1996
- [DeR07] L. De Raedt, A. Kimmig, H. Toivonen: ProbLog: A Probabilistic Prolog and Its Application in Link Discovery. IJCAI, 2007
- [Kim08] A. Kimmig, V. Santos Costa, R. Rocha, B. Demoen, L. De Raedt: On the Efficient Execution of ProbLog Programs. ICLP, 2008

3

4

Proposte di Articoli

- [Rig08] F. Riguzzi. ALLPAD: Approximate learning of logic programs with annotated disjunctions. *Machine Learning*, 70(2-3):207-223, 2008
- [Ish08] Masakazu Ishihata, Yoshitaka Kameya, Taisuke Sato, Shin-ichi Minato: Propositionalizing the EM algorithm by BDDs. *ILP*, 2008
- [Tho08] I. Thon, N. Landwehr, L. De Raedt: A Simple Model for Sequences of Relational State Descriptions. *ECML/PKDD*, 2008
- [Eli05] G. Elidan, N. Friedman: Learning Hidden Variable Networks: The Information Bottleneck Approach. *Journal of Machine Learning Research* 6, 2005

5

Proposte di Articoli

- [San03] V. Santos Costa, D. Page, M. Qazi, J. Cussens: CLP(BN): Constraint Logic Programming for Probabilistic Knowledge. *UAI*, 2003
- [Ker08] Kristian Kersting, Luc De Raedt, Bernd Gutmann, Andreas Karwath, Niels Landwehr: Relational Sequence Learning. *Probabilistic Inductive Logic Programming* 2008
- [Fra08] Paolo Frasconi and Andrea Passerini, Learning with Kernels and Logical Representations, *Probabilistic Inductive Logic Programming* 2008

6