

Applied Machine Learning

Graphical Models II - Mean Field Inference

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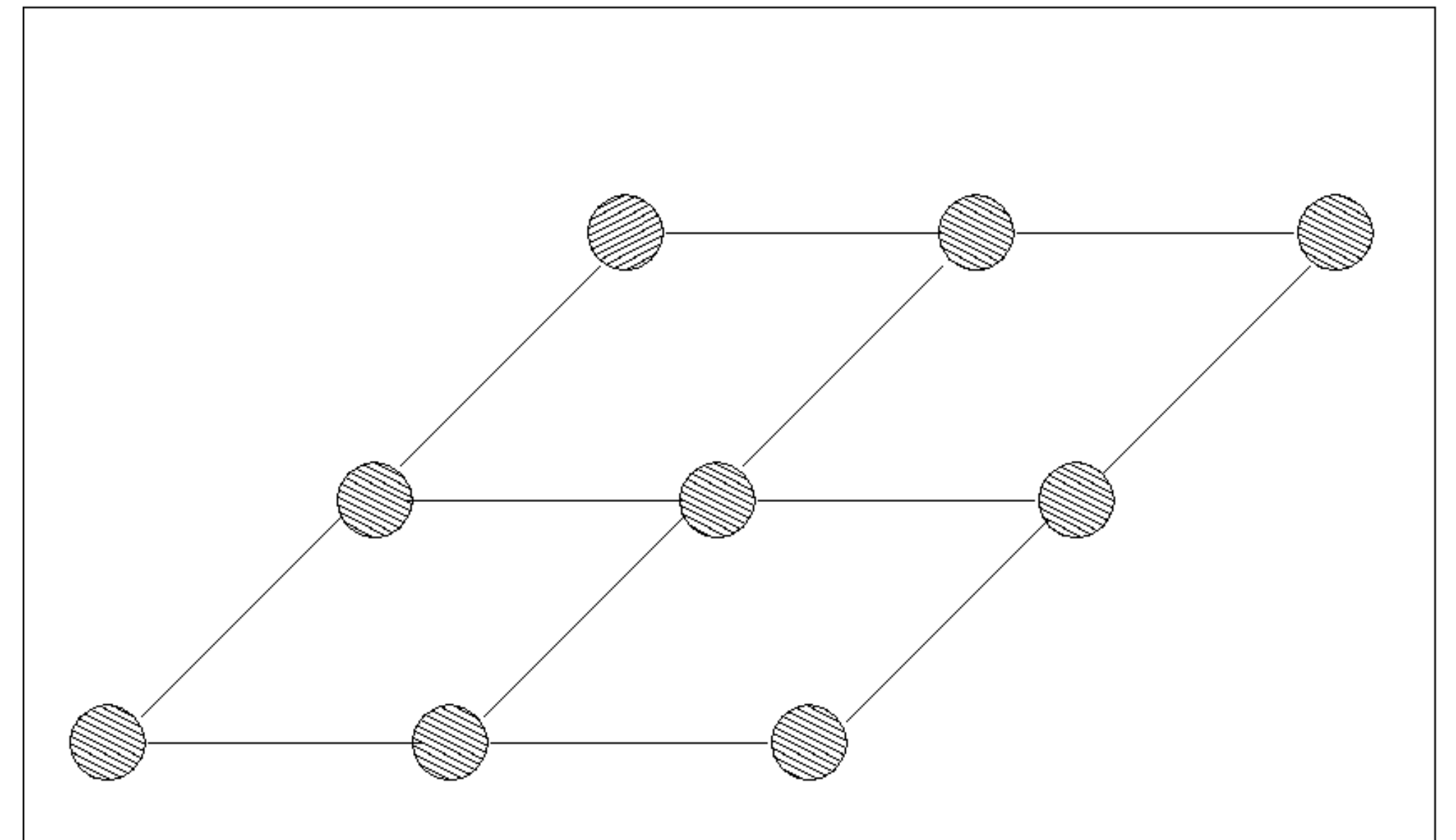
- Graphical Models
- Overview of Mean Field Inference

Graphical Models

- Process sequences
 - Markov Chains
 - Hidden Markov Models
- Mean Field Inference
- Boltzmann Machines

Mean Field Inference

- Sets:
 - H : Hidden values: potentially very large
 - X : Observations
- Find hidden values that maximize:
 - $P(H_1, \dots, H_N | X)$
- Mean Field Inference:
 - approximate probability distribution



Mean Field Inference Overview

- Mean Field Inference for Image Denoising
- Boltzmann Machines
 - Variational Inference
 - Mean Field Inference
- Discrete Markov Random Fields

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