Introduction to Machine Learning

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Concepts

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Artificial Intelligence ⊃ Machine Learning
Artificial Intelligence  Machine Learning  Classical Learning  Statistical Learning  Reinforcement Learning  Semi-Supervised Learning  Active Learning  Deep Learning  Deep Learning  Unsupervised Learning  Unsupervised Learning  Classification  Classification  Classification  Clustering  Density Estimation  Dimensionality Reduction
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Contents

- Inference in Probabilistic Models: Probabilistic Reasoning; Basic Graph Concepts; Belief Networks; Graphical Models; Efficient Inference in Trees; The Junction Tree Algorithm; Making Decisions
- Learning in Probabilistic Models: Statistics for Machine Learning; Learning as Inference; Naive Bayes; Learning with Hidden Variables; Bayesian Model Selection
- Machine Learning: Machine Learning Concepts; Nearest Neighbor Classification; Unsupervised Linear Dimension Reduction; Supervised Linear Dimension Reduction; Linear Models; Bayesian Linear Models; Gaussian Processes; Mixture Models; Latent Linear Models; Latent Ability Models
- Dynamical Models: Discrete-State Markov Models; Continuous-State Markov Models; Switching Linear Dynamical Systems; Distributed Computation
- Approximate Inference: Sampling; Deterministic Approximate Inference