Contextual Area

Machine Learning

Examiner
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Description
Machine learning is the ability of a machine to improve its performance based on previous results. Algorithms and techniques already known, e.g. perceptrons, boosting, Kalman filtering, support vector machines, hidden Markov models, Bayesian networks, etc. lead to applications such as pattern recognition, information retrieval, classification, behavior modeling. How and why do these methods work? What algorithm to use? e.g. when to use statistical inference techniques? How to structure the data that the algorithm learns from?

Limitation: this is my contextual area and should not be about technology details, but should give me the intuition for what method to use, where, how, and why.

Written Requirement
The written requirement for this area will consist of a 24-hour take-home exam to be evaluated by Professor Deb K. Roy.

Signature: ______________________________ Date: ______________
Reading List

Books:


Theses:


Relevant publications:


