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14SCS41

Fourth Semester M.Tech. Degree Examination, Aug./Sept. 2020
Machine Learning Techniques

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Define Machine Learning. Explain basic design issues in Machine Learning. (10 Marks)
b. Explain Candidate Elimination Learning Algorithm. (10 Marks)
- 2 a. Illustrate General-to-Specific ordering of hypothesis with an example. (10 Marks)
b. Define concept learning. Explain concept learning with an example. (10 Marks)
- 3 a. Define a decision tree. Illustrate construction of a learned decision tree for the concept of "Play Tennis". (10 Marks)
b. Illustrate the design choice made for the Checker's learning problem. (10 Marks)
- 4 a. Illustrate the Neural Network representation in ALVINN system. (10 Marks)
b. Define a perceptron. Explain a two input perceptron representation in a hyper plane. (10 Marks)
- 5 a. Explain Prototypical. Genetic algorithm. (10 Marks)
b. Explain genetic programming with a example. (10 Marks)
- 6 a. Explain Baye's theorem. (10 Marks)
b. Explain Gibbs algorithm. (10 Marks)
- 7 a. Explain K-Nearest algorithm for continuous valued target functions. (10 Marks)
b. Explain learning set of first order rules. (10 Marks)
- 8 a. Explain Q function and Q learning algorithm. (10 Marks)
b. Compare inductive learning and analytical learning. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.