EUROPEAN INFORMATION TECHNOLOGIES CERTIFICATION INSTITUTE, ASBL.

Brussels, Belgium, European Union

CERTIFICATE

Mateusz Pytel

Has successfully completed test requirements of
The European Information Technologies Certification Programme

EITC/AI/AIF Artificial intelligence fundamentals

Certification Programme examination result: 98%

Certification Programme description:

Introduction to artificial intelligence: natural intelligence vs. artificial intelligence, problems and tasks of artificial intelligence; Inference: inference tasks, syntax and semantics of predicate logic, PROLOG language as an example of inference system (PROLOG as a declarative language, syntax, lists, resolution and unification), inference on the basis of uncertain and incomplete knowledge (imperfect knowledge in inference and its processing methods, Bayesian inference, fuzzy logic and fuzzy inference); Strategies and methods for searching: backward and forward chaining, problem solving by space searching, evaluation function, heuristic function, search strategies based on functions, random search methods (computational complexity, random sampling algorithm, hill climbing algorithm, simulated annealing algorithm); Two-persons game (game model and game tree, choice of move, minimax algorithm, alpha-beta pruning); Inductive inference: conditional attribute properties, supervised learning with teacher, error function, Occam's razor principle, training and test sets; Classification: classification problem, decision tree, classification rules, classification of example elements, memory and its use; Linear and nonlinear regression: parametric model of regression, delta rule, linear and nonlinear models, approximation, neural networks (multilayer perceptron, network parameters) with reinforcement learning: reinforcement learning tasks, Markov decision processes, stochastic strategies, dynamic programming, Q-learning, use of reinforcement learning

Certificate Programme version/revision: EITC/AI/AIFv1r2

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