ABSTRACT

A COMPUTER IMPLEMENTED METHOD AND SYSTEM FOR AUTOMATICALLY MODELLING A PROBLEM AND ORCHESTRATING CANDIDATE ALGORITHMS TO SOLVE THE PROBLEM

A computer implemented method for automatically modelling a problem and orchestrating algorithms to obtain a solution to the problem is described, the method comprising the steps of establishing that a task has to be performed to solve the problem; deriving at least one subtask from the task; and selecting a plurality of candidate algorithms based on the at least one subtask. The method further comprises the steps of training the plurality of selected candidate algorithms to obtain training statistics and building a template POMDP model based on the plurality of selected candidate algorithms and the training statistics. The method further comprises the steps of parametrizing the template POMDP model into POMDP model parameters; and implementing a genetic algorithm to optimize the POMDP model parameters, wherein the solution to the problem is derived from the optimized POMDP model parameters.

[Figure 2]