Final Year Project Report

Full Unit - Complexity and NP hardness

Playing Games and Solving Puzzles Using AI

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Declaration

This report has been prepared on the basis of my own work. Where other published and unpublished source materials have been used, these have been acknowledged.

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An n^2 x n^2 Sudoku is NP complete, as the problem is in NP, it can be represented as a decision problem, there either being a solution that can be verified in polynomial time or no solution and NP hard, as Sudoku can be represented as a graph colouring problem which is known to be NP hard as there is a polynomial time many-one reduction of this to Sudoku which implies it is NP hard.