CIS 4930 – Introduction to Artificial Intelligence

Group 1:

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Algorithm to solve Sudoku using CSP

Our group decided to work on an algorithm that can solve any type of Sudoku 9x9. The problem with this is that the algorithm must be fast and optimal, therefore we decided to solve it as a CSP, where the constraints will be the regular constraints in the Sudoku game. We are going to read the initial state of the Sudoku using a csv file and compare the output of the program with the predefined solution (also in a csv file) of the Sudoku. We are going to use arc consistency as our backtracking search mechanism. We expect the program to run under O(bd) if correct heuristics and constraints are applied. The files used as samples for the program can be solved without taking more than 200 steps, therefore our program should be able to do the same.