Team Name: Problem Solvers of the 21st Century

Intro: Artificial Intelligence (COMP 8700)
Draft Project Proposal

University of Windsor

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1. **Proposed Project Name:** *Solving Maze Problem Using Different Algorithms*
2. **Team Name & Members:** *Problem Solvers of the 21st Century*
   (a) SayedMohammad Hashemi (Student NO: 110104372, Email: `hashem62@uwindsor.ca`)
   (b) MohammadEhsan Akhavanpour (Student NO: 110081831, Email: `akhavanm@uwindaor.ca`)
   (c) Mohammad Vatani Nezafat (Student NO: 110106577, Email: `Vatanin@uwindsor.ca`)
3. **The Problem:** Grid Maze Problem
   An Agent starts from one cell of a grid and ends up at another destination cell via a series of 4-directional steps. The grid has some blocked cells. The agent must find its path to the destination through the maze.
   You can find a sample of our project's environment in figure 1:

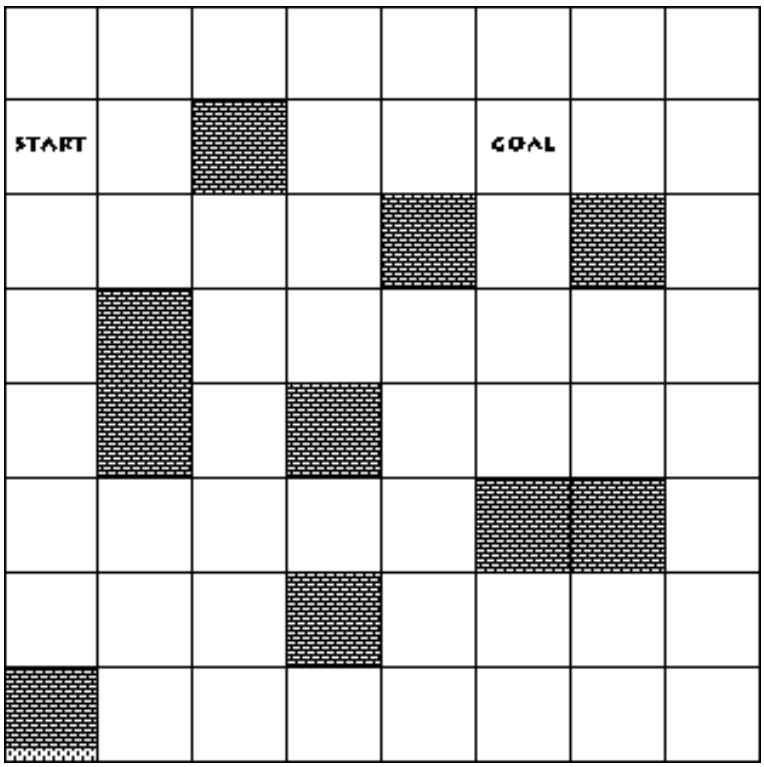

Figure 1: A grid maze with sample start and goal

4. **Relevant AI Techniques:** *A-star (using three different heuristics), Greedy Best First Search (using three different heuristics), DFS, and BFS algorithms.*
5. **Workload & its distribution:**

(a) Implementation of A-star and Greedy Best First Search (using three different heuristics), DFS, and BFS:

i. SayedMohammad Hashemi will implement A-Star.

ii. MohammadEhsan Akhavanpour will implement Greedy Best First Search.

iii. Mohammad Vatani Nezafat will implement DFS and BFS.

(b) Graphics and Demonstration:
We will implement this part together and divide it in case we need to do so.

(c) Test:
Each of us will make different grid mazes manually and by code.

(d) Documentation:
Each of us will Write the technical documents of his part and we will integrate them together.

6. **Implementation & Demonstration:**
All the mentioned algorithms will be implemented and demonstrated graphically.