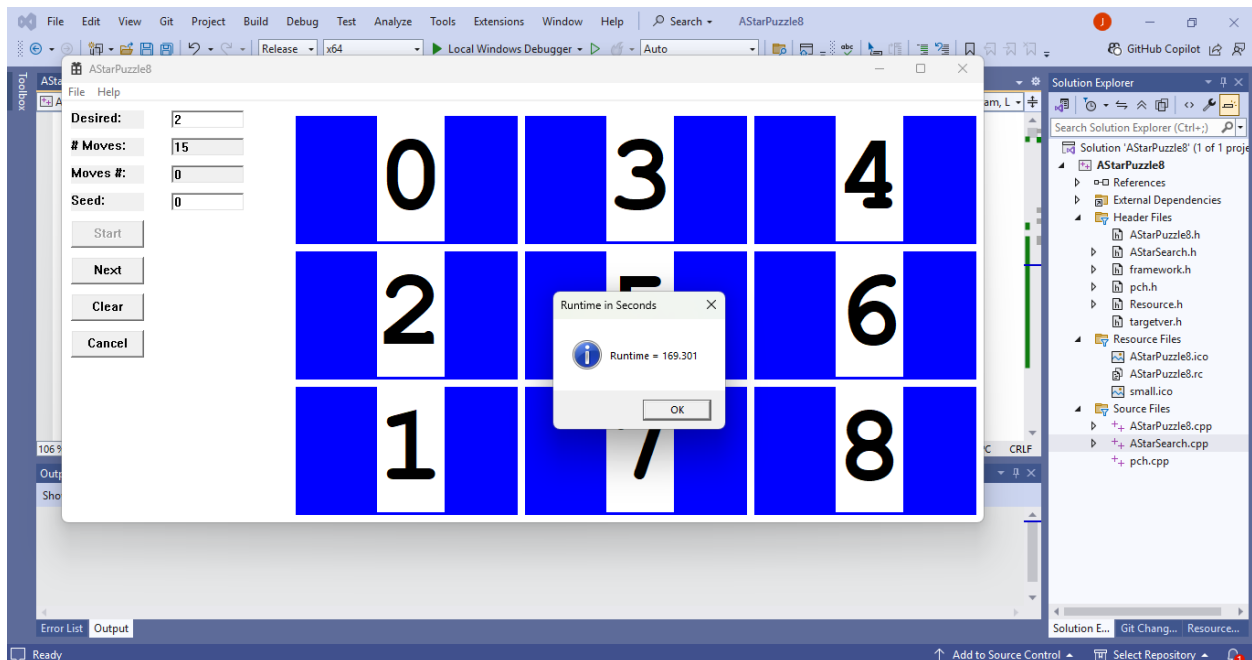


Blog Entry © Sunday, November 23, 2025, by James Pate Williams, Jr. Modification of My A* Informed Search Solver for the 8-Tile Puzzle

References: ***Artificial Intelligence: A Modern Approach First, Second, and Fourth Editions*** by Stuart Russell and Peter Norvig. The fourth edition is free to be read online or downloaded as a Portable Document File (PDF).

I developed a new A* Informed Search application that solves the 8-Tile Puzzle. The heuristic utilized is the Manhattan (City-Block) heuristic. The program's graphical user interface has four edit controls and four buttons. The edit controls are the desired number of out of place tiles, the number of moves, the move number, and the pseudo-random number generator (PRNG) seed. If the PRNG seed is zero, then the generator is seeded using the system time. The buttons are: "Start", "Next", "Clear", and "Cancel". The "Next" button allows the user to step through the solution one step at a time.



AStarPuzzle8

File Help

Desired:

Moves:

Moves #:

Seed:

Start

Next

Clear

Cancel

2	3	4
0	5	6
1	7	8

AStarPuzzle8

File Help

Desired:

Moves:

Moves #:

Seed:

Start

Next

Clear

Cancel

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AStarPuzzle8

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AStarPuzzle8

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2	3	4
1	6	8
7	5	0

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7	6	5

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File Help

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Moves #:

Seed:

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Next

Clear

Cancel

1	2	3
8	0	4
7	6	5