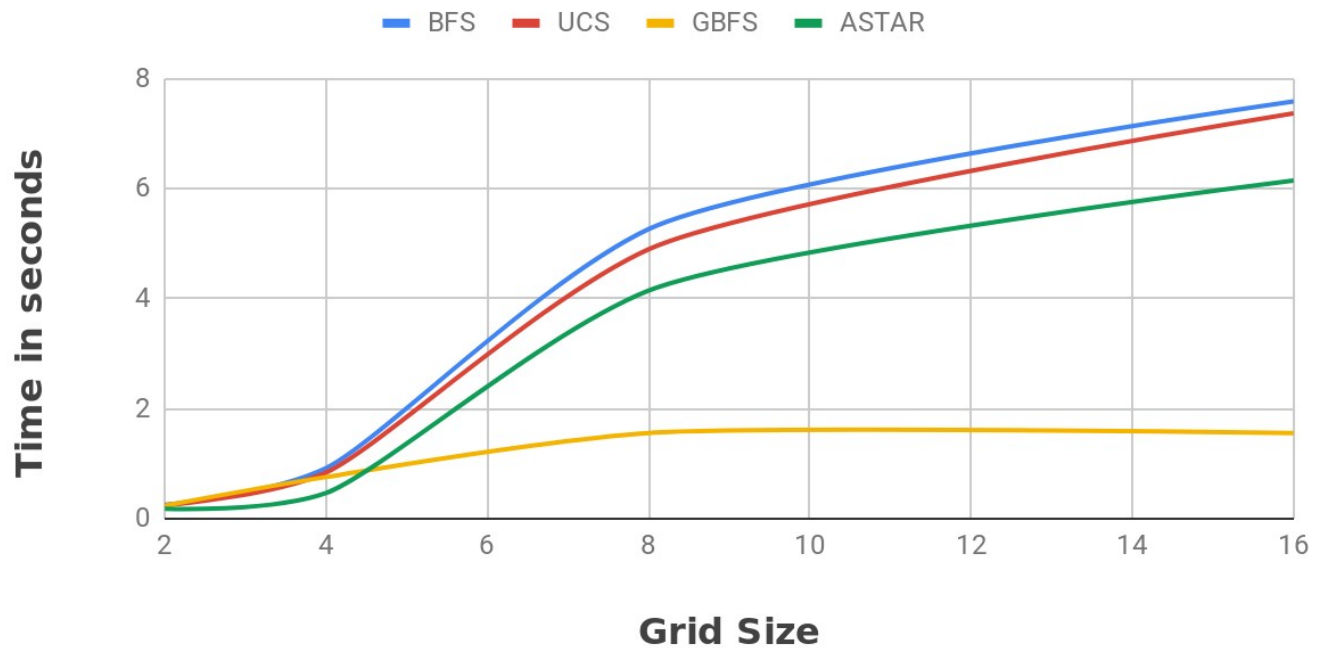Here we considered the time taken by the algorithm to search for a path and GBFS_HS and ASTAR_HS are GBFS and ASTAR searches respectively with a new heuristic function new heuristic function, heuristic *= (1 + p), where p is a random lesser value choosen as p < (minimum cost of taking one step)/(expected maximum path length) and my value for p is 0.03125

Table of Values:

Grid Size	BFS	UCS	GBFS	ASTAR	GBFS_HS	ASTAR_HS
2	0.251115799	0.2436784744	0.2367495537	0.1790046692	0.134847784	0.180006361
4	0.9209672928	0.8406807899	0.7559557915	0.4655357838	0.2640821934	0.5224914074
8	5.265174007	4.898203993	1.556060839	4.147250032	0.7565060139	1.733352757
16	7.589027357	7.369818354	1.556952858	6.148706436	1.043037415	6.447168827

MULTIPLE SEARCH ALGORITHMS COMPARISION GRAPH

COMPARISION BETWEEN NEW AND OLD HEURISTICS FOR GBFS AND A*