

Assignment 2 Report – Heuristic Search

CSE 415: Introduction to AI, Winter, 2021

Group members:

Name: Sheng Yu Student Number: 1736385 UID: shengy23

Name: Qiaoxue Liu Student Number: 1738204 UID: qiaoxl

Result with Heuristics for the Eight Puzzle:

Puzzle	Heuristic	Solved?	# Soln Edges	Soln Cost	# Expanded	Max OPEN
A	None (UCS)	Yes	7	7	166	101
A	Hamming	Yes	7	7	7	6
A	Manhattan	Yes	7	7	7	6
B	None (UCS)	Yes	12	12	1490	898
B	Hamming	Yes	12	12	94	72
B	Manhattan	Yes	12	12	33	25
C	None (UCS)	Yes	14	14	4070	2290
C	Hamming	Yes	14	14	189	127
C	Manhattan	Yes	14	14	56	39
D	None (UCS)	Yes	16	16	7982	4700
D	Hamming	Yes	16	16	589	368
D	Manhattan	Yes	16	16	148	96

Puzzle A: [3,0,1,6,4,2,7,8,5]

Puzzle B: [3,1,2,6,8,7,5,4,0]

Puzzle C: [4,5,0,1,2,8,3,7,6]

Puzzle D: [0,8,2,1,7,4,3,6,5]