

Búsqueda Informada: A* vs IDA*

JUNE 6, 2021

1 15Puzzle

Para el 15Puzzle usamos como heurística la distancia Manhattan.

STATE (EASY):	14 1 9 6 4 8 12 5 7 2 3 B 10 11 13 15				
	FUNCTION	TIME (SEC)	MEMORY (GB)	NODES/SEC	SOL-LEN
	A*	172.613782	5.39361	138210.58622	45
	A* pruning	2.627228	0.04398	62283.51708	45
	A* late pruning	2.593914	0.04016	90053.48674	45
	IDA*	294.174137	0.00055	243362.32182	45
	IDA* pruning	1.537629	0.0129	410535.96154	45
	IDA* part pruning	2.629333	0.00024	240086.36411	45

STATE (MEDIUM):	12 9 B 6 8 3 5 14 2 4 11 7 10 1 15 13				
	FUNCTION	TIME (SEC)	MEMORY (GB)	NODES/SEC	SOL-LEN
	A*		TOO MUCH MEMORY		
	A* pruning	361.748725	2.56905	26938.20137	50
	A* late pruning	184.561287	2.34054	85301.65917	50
	IDA*		TOO MUCH TIME		
	IDA* pruning	243.698492	0.00148	413353.29231	50
	IDA* part pruning	421.172057	0.0001	239603.34577	50

STATE (HARD):	5 9 13 14 6 3 7 12 10 8 4 B 15 2 11 1				
	FUNCTION	TIME (SEC)	MEMORY (GB)	NODES/SEC	SOL-LEN
	A*		TOO MUCH MEMORY		
	A* pruning	633.547779	4.1973	25436.99234	57
	A* late pruning	305.977159	3.92621	77683.54042	57
	IDA*		TOO MUCH TIME		
	IDA* pruning	349.547181	0.00082	404336.85832	57
	IDA* part pruning	591.625852	0.00195	238931.14461	57

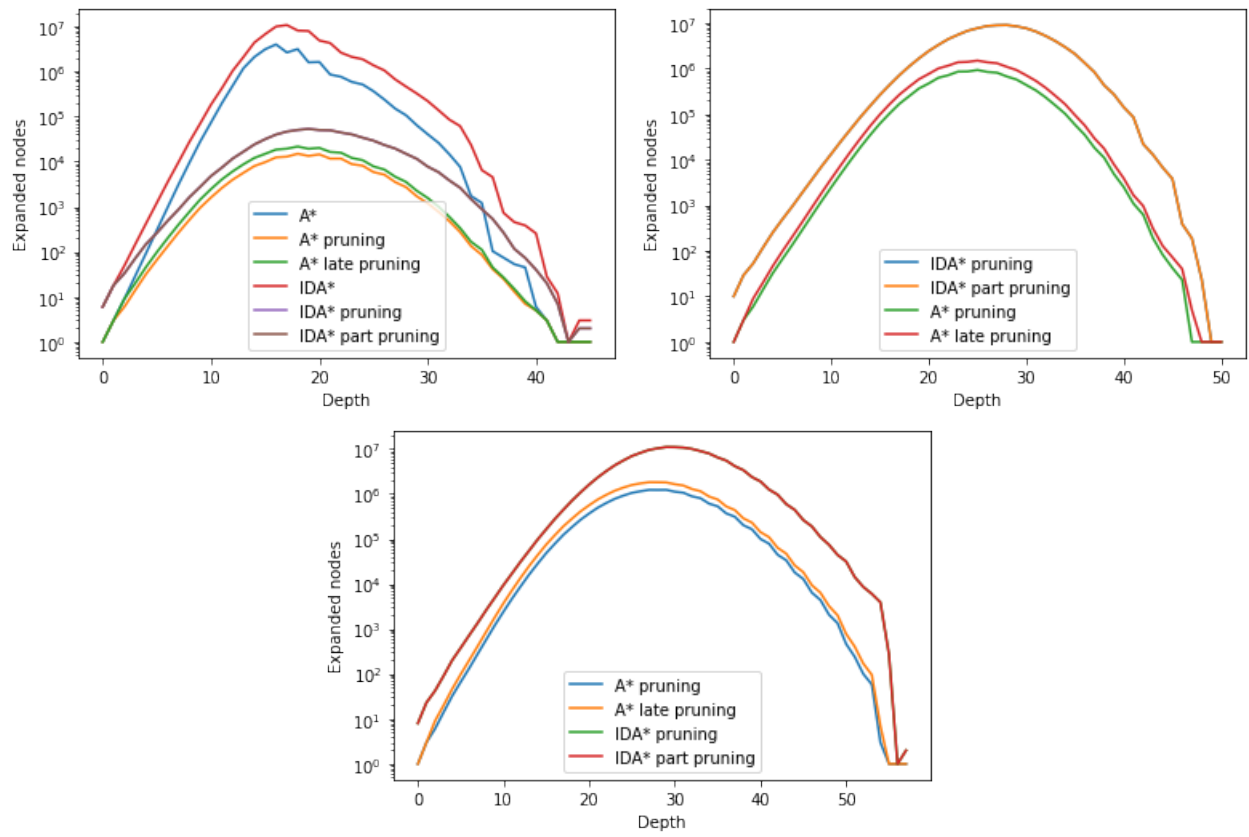


Figure 1: Left, easy. Right, medium. Down, hard