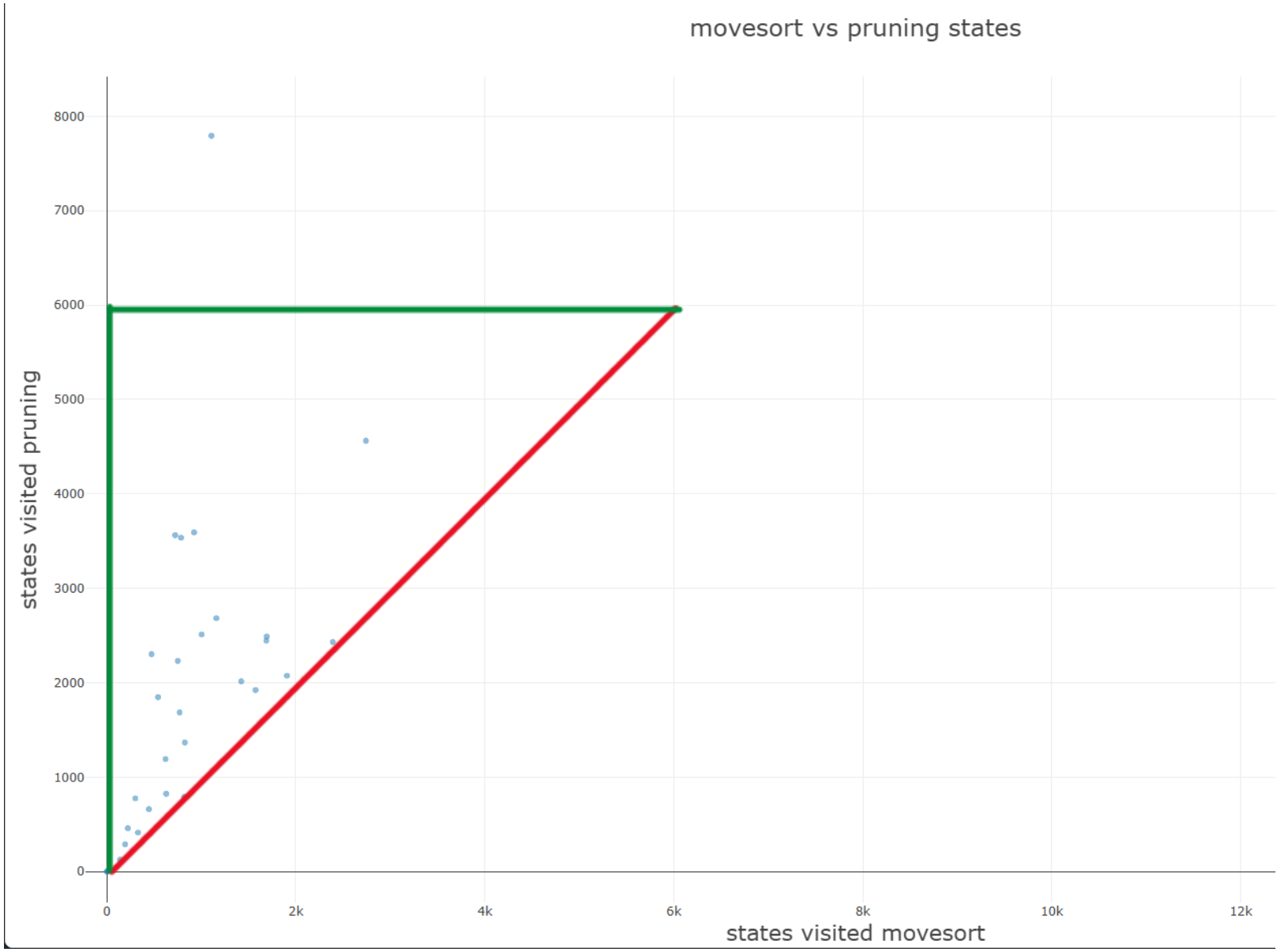
Assignment 4

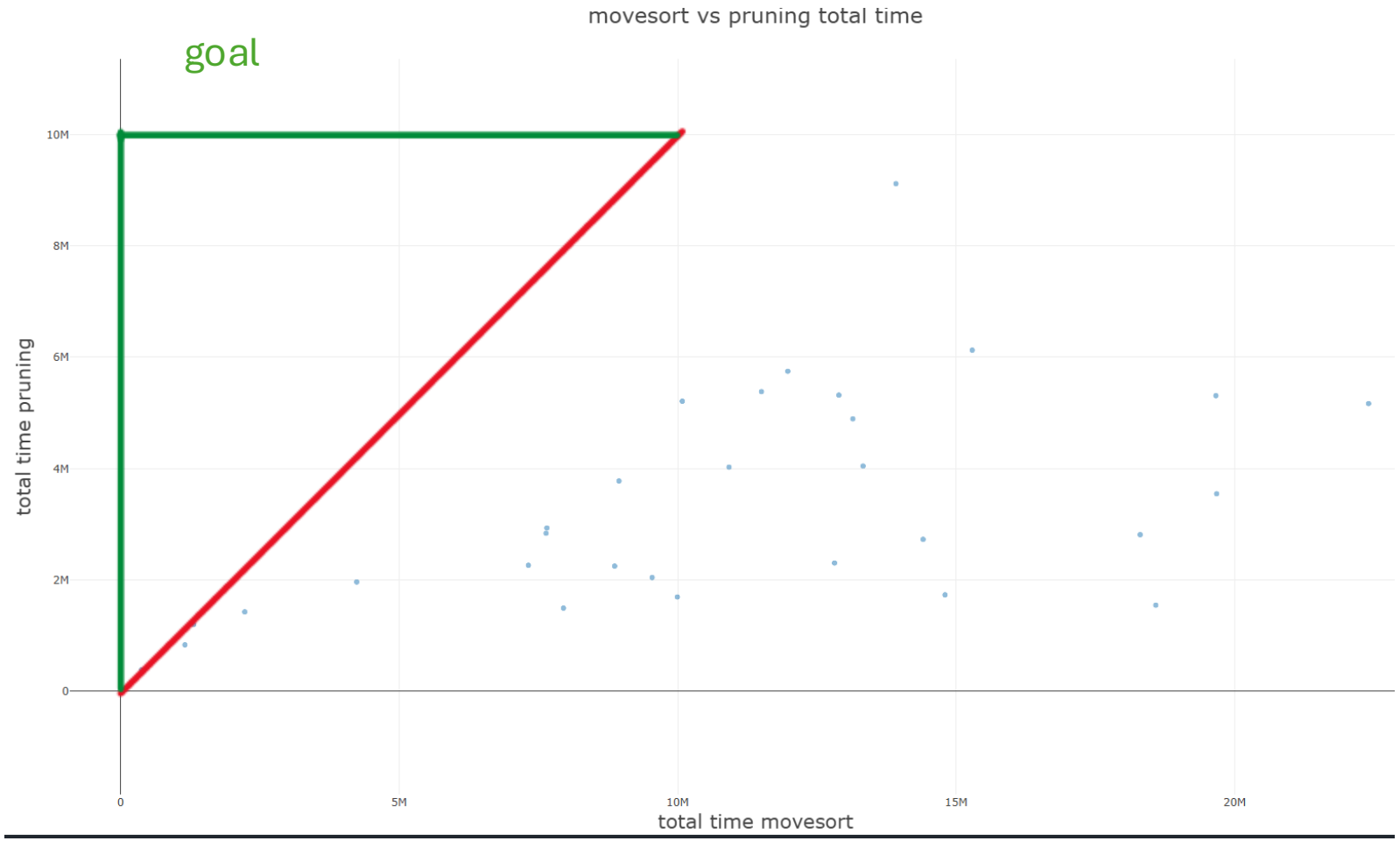
Group 6

moveSort



Amount of states visited decreases comprehensibly

→ Theoretically more efficient



Significantly more time needed for moves

→Overhead is far too expensive

Solution A

Streamline move sorting

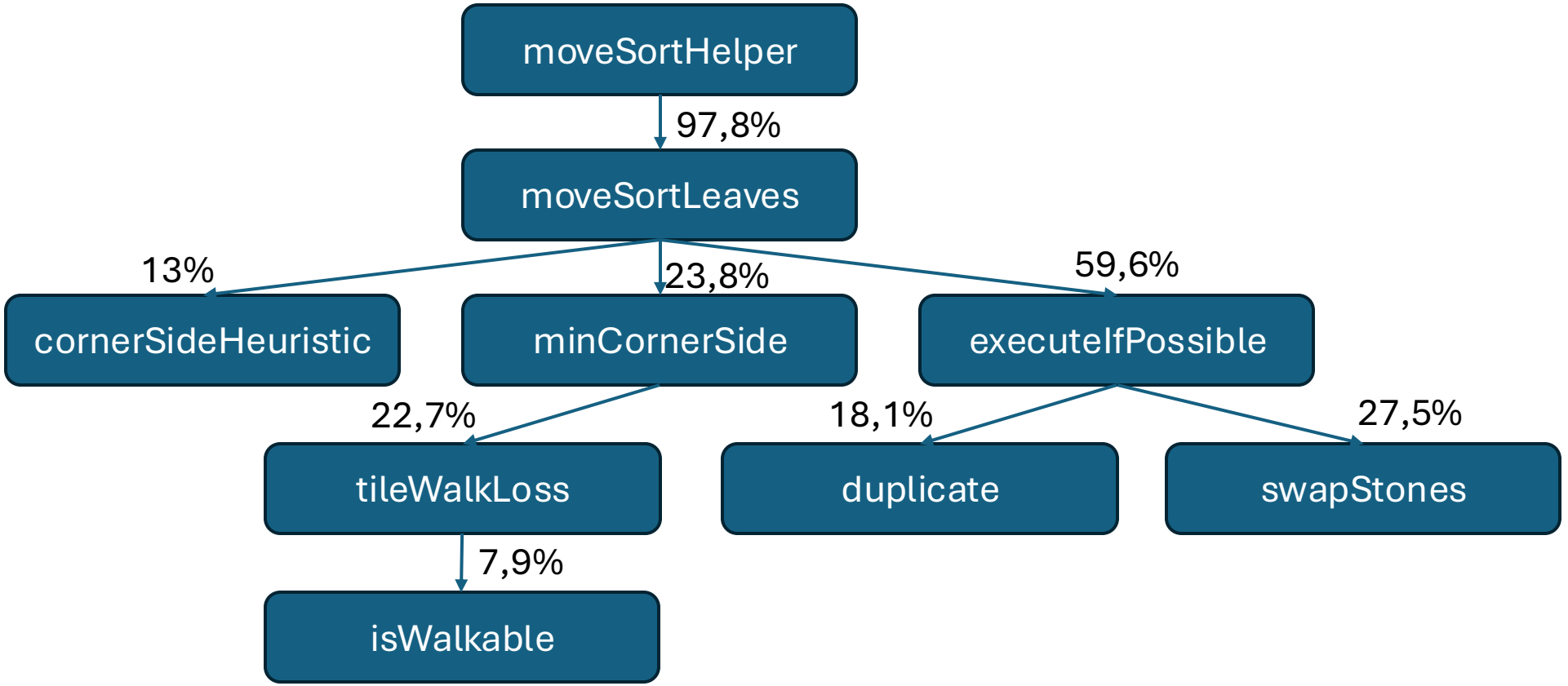
Solution B

The moveSortZwei function

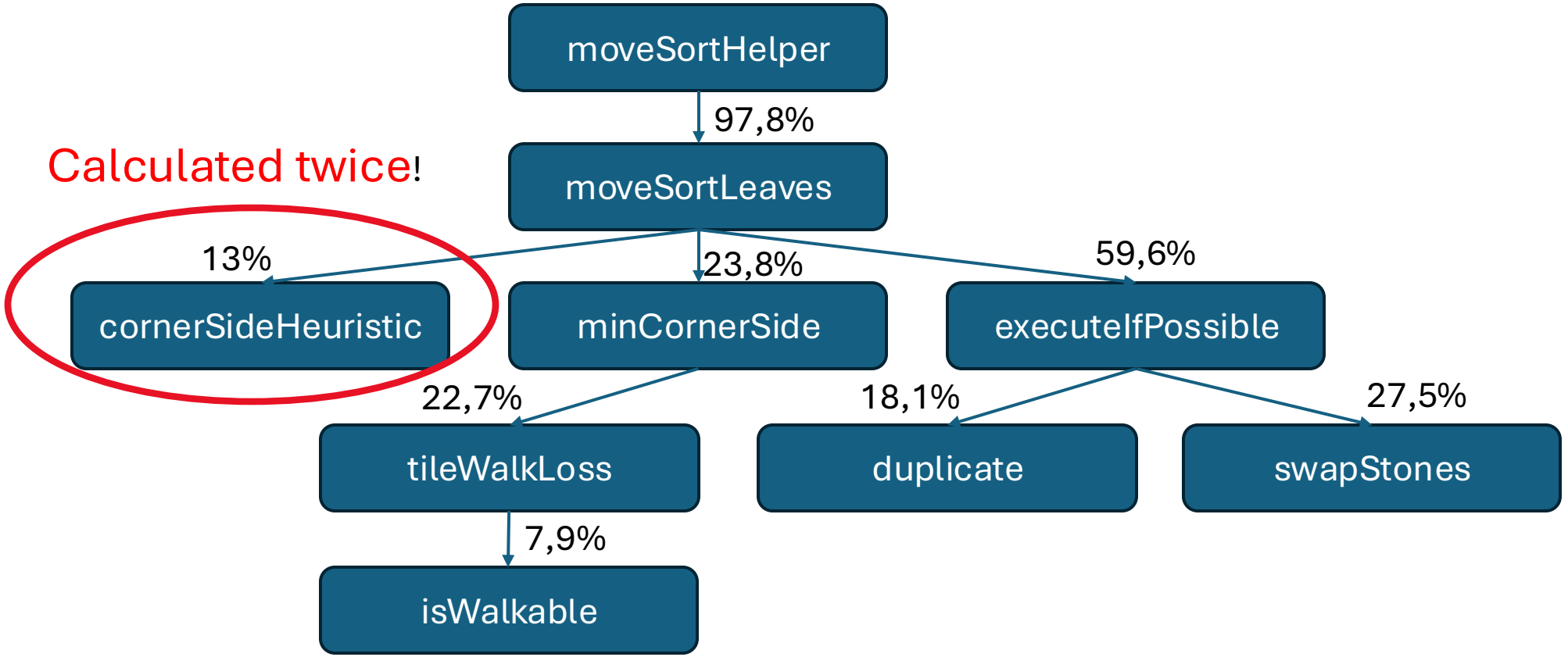
- Benefits of MiniMaxVier (Heuristics evaluating moves in positions)
- Implements move sorting with alpha-beta pruning
- CornerSideHeuristic possible

Total computation time distribution in percent			
Map Name	MiniMax	alpha-beta pruning	improved move sorting
50_50_8_25_rnd_1	78,9	16,75	2,35
2025_g6_3_competetive	70,25	21,9	5,57
standard map	29,2	19,33	9,65
2025_g6_2_pikatchu	83,28	11,31	4,53

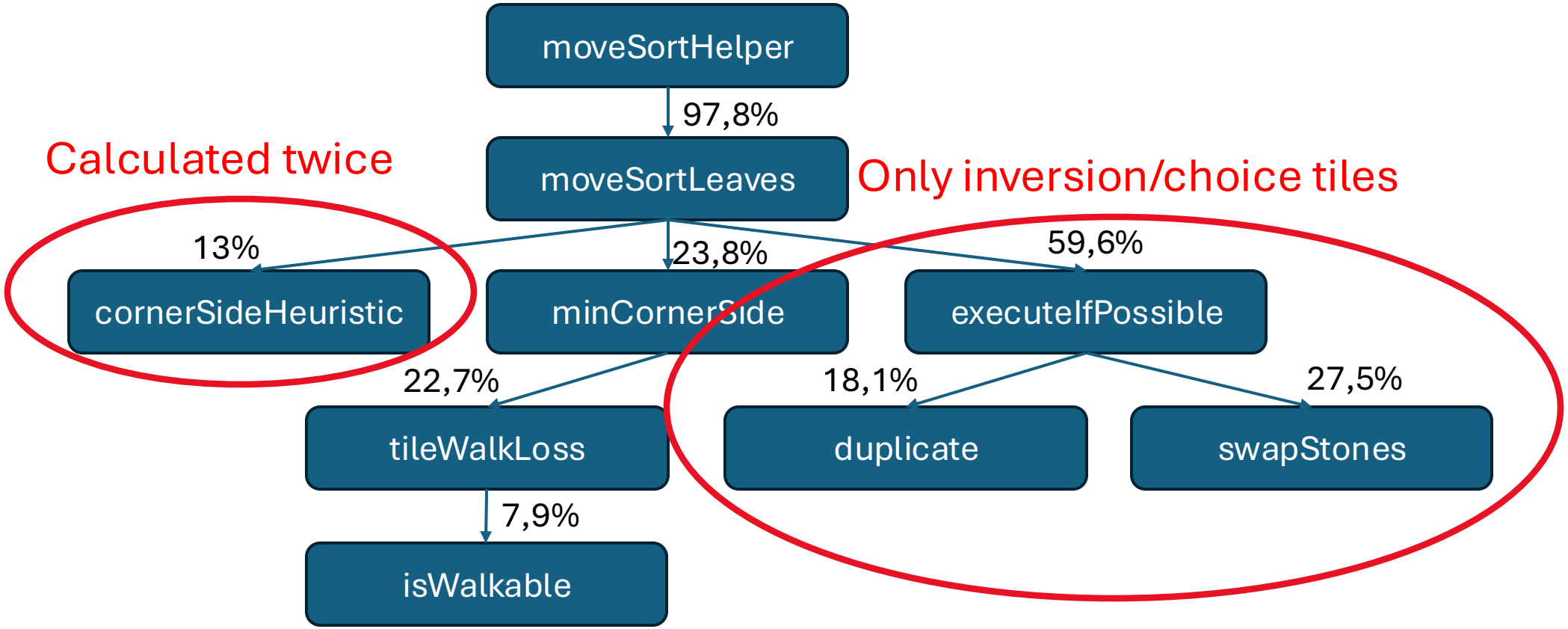
Time distribution in moveSortZwei



Time distribution in moveSortZwei



Time distribution in moveSortZwei

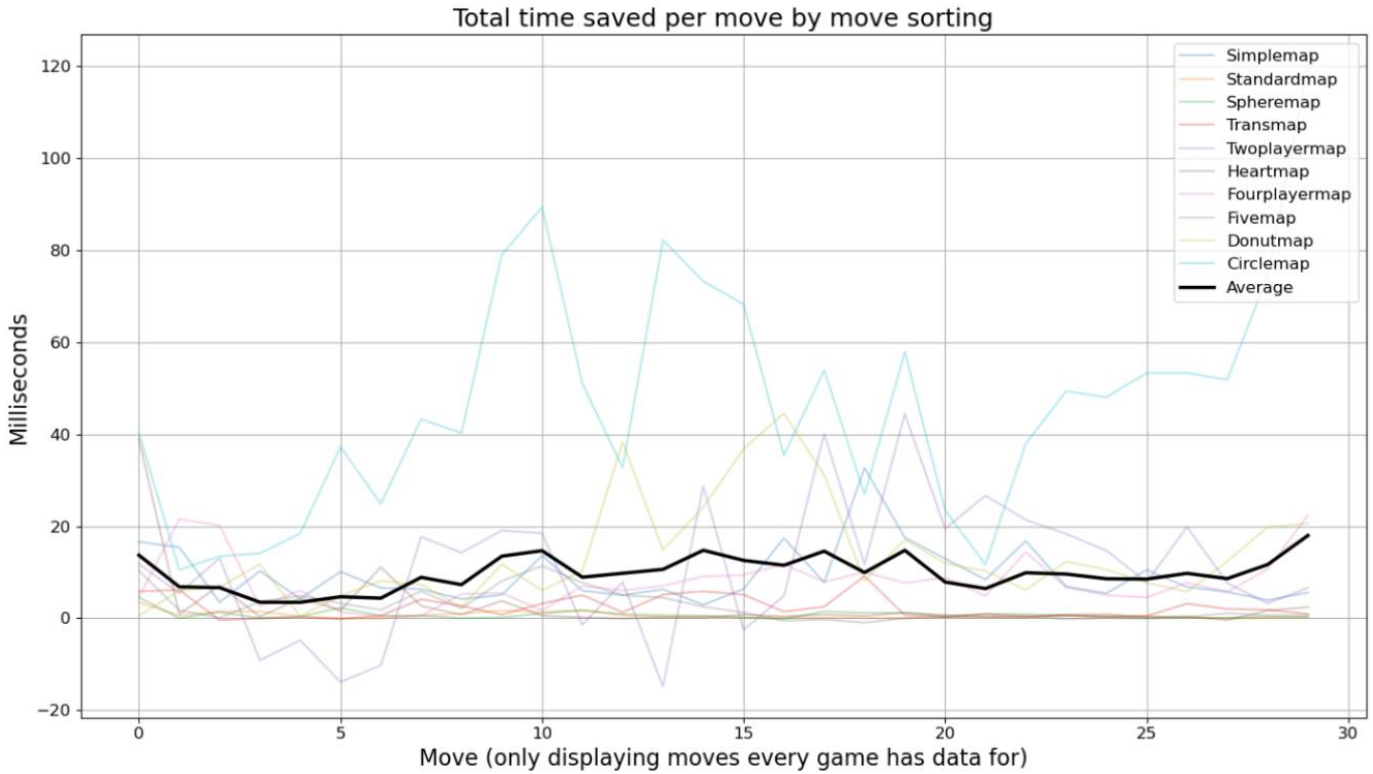


Performance Evaluation

Using the Measurement System implemented earlier

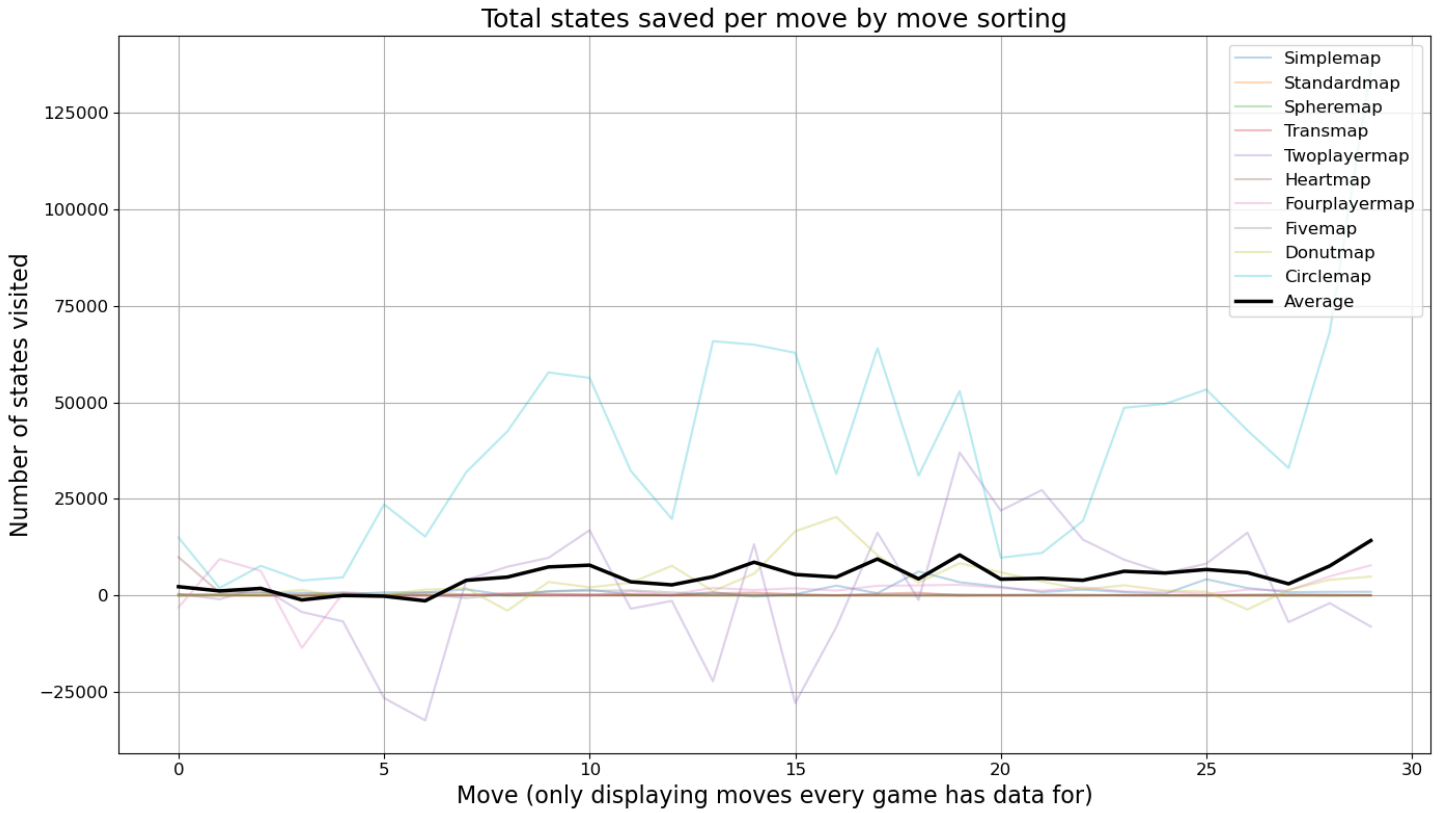
Performance Improvements

- Large Maps yield a higher performance increase



Number of states saved

- Explains the performance gain based on map size



Move sorting accuracy

- 36.7% probability over all maps