Supplementary Materials
Learning 2-opt Heuristics for the Traveling Salesman Problem via Deep Reinforcement Learning

1. Performance on TSPlib Instances

We show the performance of our method in comparison to OR-Tools (Perron and Furnon) on 35 TSPlib (Reinelt, 1991) instances in Table 1 below.

Table 1: Performance of OR-Tools vs our method on TSPlib instances.

Instance	Opt.	Ours {2,000}	OR-Tools
eil51	426	**427**	439
berlin52	7,542	7,974	**7,944**
st70	675	**680**	683
eil76	538	552	**548**
pr76	108,159	111,085	**110,948**
rat99	1,211	1,388	**1,284**
rd100	7,910	**7,944**	8,221
kroA100	21,282	23,751	**21,960**
kroB100	22,141	23,790	**22,945**
kroC100	20,749	22,672	**21,699**
kroD100	21,294	23,334	**22,439**
kroE100	22,068	23,253	**22,551**
eil101	629	**635**	650
lin105	14,379	16,156	**15,363**
pr107	44,303	54,378	**44,573**
pr124	59,030	59,516	**60,413**
bier127	118,282	**121,122**	121,729
ch130	6,110	**6,175**	6,329
pr136	96,772	**98,453**	102,813
pr144	58,537	61,207	**59,286**
ch150	6,528	**6,597**	6,733
kroA150	26,524	30,078	**27,503**
kroB150	26,130	28,169	**26,671**
pr152	73,682	**75,301**	75,832
u159	42,080	**42,716**	43,403
rat195	2,323	2,955	**2,375**
kroA200	29,368	32,522	**29,874**
ts225	126,643	**127,731**	127,763
tsp225	3,919	4,354	**4,117**
pr226	80,369	91,560	**83,113**
gil262	2,378	**2,490**	2,517
pr264	49,135	59,109	**51,495**
a280	2,579	2,898	**2,742**
pr299	48,191	59,422	**50,617**
pr439	107,217	143,590	**117,171**
Avg. Opt. Gap	0.00%	8.61%	3.70%

References

Laurent Perron and Vincent Furnon. Or-tools. URL https://developers.google.com/optimization/.

Gerhard Reinelt. Tsplib—a traveling salesman problem library. *ORSA journal on computing*, 3(4):376–384, 1991.