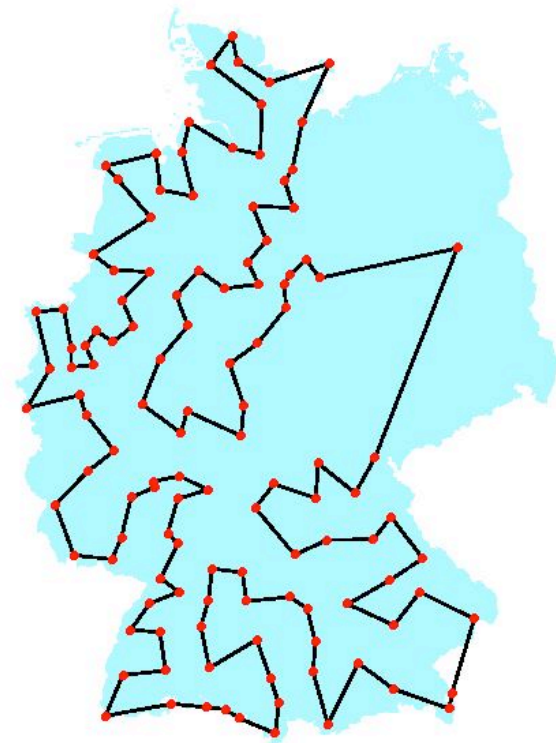


1st Artificial Intelligence CUP

Travelling salesman problem, a classical combinatorial optimization problem.

Problem: given N cities, and a distance function d between cities (usually time or kilometres), find a tour that:

- goes through every city once and only once
- minimizes the total distance



1st Artificial Intelligence CUP

Information and Knowledge
Management course

10 benchmark instances

Students have to propose and
to implement their heuristic
algorithm and to test it on the
benchmark set

Max number of seconds x run
(3 min)

Return the best computed
solution for each instance

Problems from TSPLIB

Problem	Best Known
ch130	6110
d198	15780
eil76	538
fl1577	22249
kroa100	21282
lin318	42029
pcb442	50778
pr439	107217
rat783	8806
u1060	224094

AI CUP 2006 Results

4 students below 2% average error

Aleardo Cossi

Jacopo Malnati

Daniele Sciascia

Yuval Sharon

AI CUP 2006 Results

THE WINNER IS ALEARDO COSSI

Problem	Best Known	COSSI		MALNATI		SCIASCIA		SHARON	
		COSSI	Error	MALNATI	Error	SCIASCIA	Error	SHARON	Error
ch130	6110	6110	0,00%	6143	0,54%	6110	0,00%	6110	0,00%
d198	15780	15800	0,13%	15854	0,47%	15780	0,00%	15811	0,20%
eil76	538	538	0,00%	543	0,93%	538	0,00%	538	0,00%
fl1577	22249	22685	1,96%	22840	2,66%	23280	4,63%	22871	2,80%
kroa100	21282	21282	0,00%	21282	0,00%	21282	0,00%	21282	0,00%
lin318	42029	42466	1,04%	42576	1,30%	42394	0,87%	42149	0,29%
pcb442	50778	51699	1,81%	51593	1,61%	51819	2,05%	51582	1,58%
pr439	107217	109303	1,95%	109610	2,23%	107616	0,37%	107490	0,25%
rat783	8806	9086	3,18%	9169	4,12%	9187	4,33%	9243	4,96%
u1060	224094	233380	4,14%	234078	4,46%	237646	6,05%	237133	5,82%
FINAL RESULT			1,42%		1,83%		1,83%		1,59%