

VEHICLE ROUTING

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 Energie, Mobilität,
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Problem:

inefficient and costly delivery routes, no consideration of flexible variables as loading capacity and material weight

Solution:

Al-based route planning with interactive maps

Benefit and value:

cost efficient route planning taking into account flexible and changing variables such as loading capacity and current weight

Industries: Transportation & logistics





Given are

customers with pickup orders like waste, a lorry with a capacity, a dump site and a depot.

Wanted

The minimum cost driving sequence.

Nature: Operational Research (OR) problem OR ~ Mathematical Optimisation + Economics + Informatics

> Extensions Fleet Resource Scheduling Location Planning





DEMO

Logged in and uploaded data





VEHICLE ROUTING

	Upload data											
	Control Drag and drop file here Limit 200MB per file	Browse files										
	test_data_increase_weight2.csv 0.8KB X											
	Data from input											
	Total Weight: 1792 (kg)											
(Change the maximum capacity of the truck? Default: 1000 kg	Data from input										
	1200	Total Weight: 1792 (kg)										
	(100 Change the maximum capacity of the truck? Default: 1000 kg											
	900	1000										
	700	🗹 View raw data										
	600	index	Туре	City	Street name							
		1	Start & End	Graz	Inffeldgasse 13							
		2	Drop Off	Graz	Sturzgasse 16							
		3	Pick up	Graz	Krottendorfer Straße / Lissäckerstraße							
		4	Pick up	Graz	Wilhelm-Gösser-Gasse 31							
		5	Pick up	Graz	Custozzagasse 7							
		6	Pick up	Graz	Burenstraße / Burgenlandstraße							
		7	Pick up	Graz	Grazbachgasse / Pestalozzistraße							
		8	Pick up	Graz	Baiernstraße 93							

~ Latitude Longitude Material [kg] 47.059580 15.463290 0 47.046350 15.436890 0 47.056010 15.388530 170 47.073320 15.503170 180 47.062160 15.425070 155 47.060770 15.392350 194 47.064320 15.437720 111 47.065300 15.388020 132 9 Pick up Graz Piccardigasse 22 47.025230 15.428610 149 10 Pick up Graz Föllinger Straße 13 47.112850 15.496770 199 11 Pick up Graz Pfanghofweg 45 47.116430 15.438470 117 12 Pick up Graz Harmsdorfgasse / Weinholdstraße 47.050740 15.456740 123 13 Pick up Graz Mantscha-Wald-Weg 27 47.030130 15.379880 112 14 Pick up Graz Ziegelstraße 11s 47.102040 15.428850 150

쭏 View Maps with input data

View with Material Weight



VEHICLE ROUTING



Data from input

Total Weight: 1792 (kg)

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Total Weight: 1792 (kg)

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	index	Туре	City	Street name	Latitude	Longitude	Materi
	1	Start & End	Graz	Inffeldgasse 13	47.059580	15.463290	
	2	Drop Off	Graz	Sturzgasse 16	47.046350	15.436890	
	3	Pick up	Graz	Krottendorfer Straße / Lissäckerstraße	47.056010	15.388530	
	4	Pick up	Graz	Wilhelm-Gösser-Gasse 31	47.073320	15.503170	
	5	Pick up	Graz	Custozzagasse 7	47.062160	15.425070	
	6	Pick up	Graz	Burenstraße / Burgenlandstraße	47.060770	15.392350	
	7	Pick up	Graz	Grazbachgasse / Pestalozzistraße	47.064320	15.437720	
	8	Pick up	Graz	Baiernstraße 93	47.065300	15.388020	
	9	Pick up	Graz	Piccardigasse 22	47.025230	15.428610	
	10	Pick up	Graz	Föllinger Straße 13	47.112850	15.496770	
	11	Pick up	Graz	Pfanghofweg 45	47.116430	15.438470	
	12	Pick up	Graz	Harmsdorfgasse / Weinholdstraße	47.050740	15.456740	
	13	Pick up	Graz	Mantscha-Wald-Weg 27	47.030130	15.379880	
	14	Pick up	Graz	Ziegelstraße 11s	47.102040	15.428850	

View Maps with input data

View with Material Weight





VEHICLE ROUTING



RESULTS



Sending the experiment to the tracking server. Please wait...

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TRACKING SERVER

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			stately-wolf-26	⊘ 2 months ago	3.1s	1000	12	16	1016				Andrea Manuetos

Tracking input & output Files





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