



Melodic multi-cloud management in finance and mobility

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Melodic

optimized multicloud

A single universal platform
for optimized deployment and management
of applications in the cloud

Created as part of the **Horizon 2020** Research & Innovation program.



Melodic

optimized multcloud



APPLICATIONS & DATA



MULTICLOUD





INVESTMENTS





AI INVESTMENTS - profits from Multi-Cloud optimization



- **Predicting asset prices** using neural networks
- **Portfolio optimization** using Monte Carlo Tree Search
- Investment strategies created by AI
- Dynamic adaptation to market conditions
- Stochastic risk control

AI - the future of investing



AI INVESTMENTS - profits from Multi-Cloud optimization

On-premises*				Cloud base**			Cloud burst***			Total cost M	Total cost 3Y
Servers	GPUs	GPU time	cost	GPUs	GPU time	cost	GPUs	GPU time	cost		
1	2	1 440	\$181	8	5 760	\$5 599	40	1 133	\$1 101	\$6 880	\$247 695
2	4	2 880	\$361	6	4 320	\$4 199	40	1 133	\$1 101	\$5 661	\$203 807
3	4	4 320	\$542	4	2 880	\$2 799	40	1 133	\$1 101	\$4 442	\$159 918
4	4	5 760	\$722	2	1 440	\$1 400	40	1 133	\$1 101	\$3 223	\$116 030
5	1	7 200	\$903	0	0	\$0	1	133	\$101	\$1 004	\$72 141
6	1	8 640	\$1 083	0	0	\$0	38	1 046	\$1 046	\$2 129	\$76 659
7	1	10 080	\$1 264	0	0	\$0	36	1 046	\$1 046	\$2 250	\$81 177
8	1	11 520	\$1 444	0	0	\$0	34	963	\$936	\$2 380	\$85 695
9	18	12 960	\$1 625	0	0	\$0	32	906	\$881	\$2 506	\$90 213
10	20	14 400	\$1 806	0	0	\$0	30	850	\$826	\$2 631	\$94 731
25	50	36 000	\$4 514	0	0	\$0	0	0	\$0	\$4 514	\$162 500

175,554 \$

- The optimal implementation cost: USD 72,141
- The difference between the best and the worst solution: USD 175,554





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OPTIMALI - optimization of vehicle sharing mobility



Optimali is AI based platform for advanced

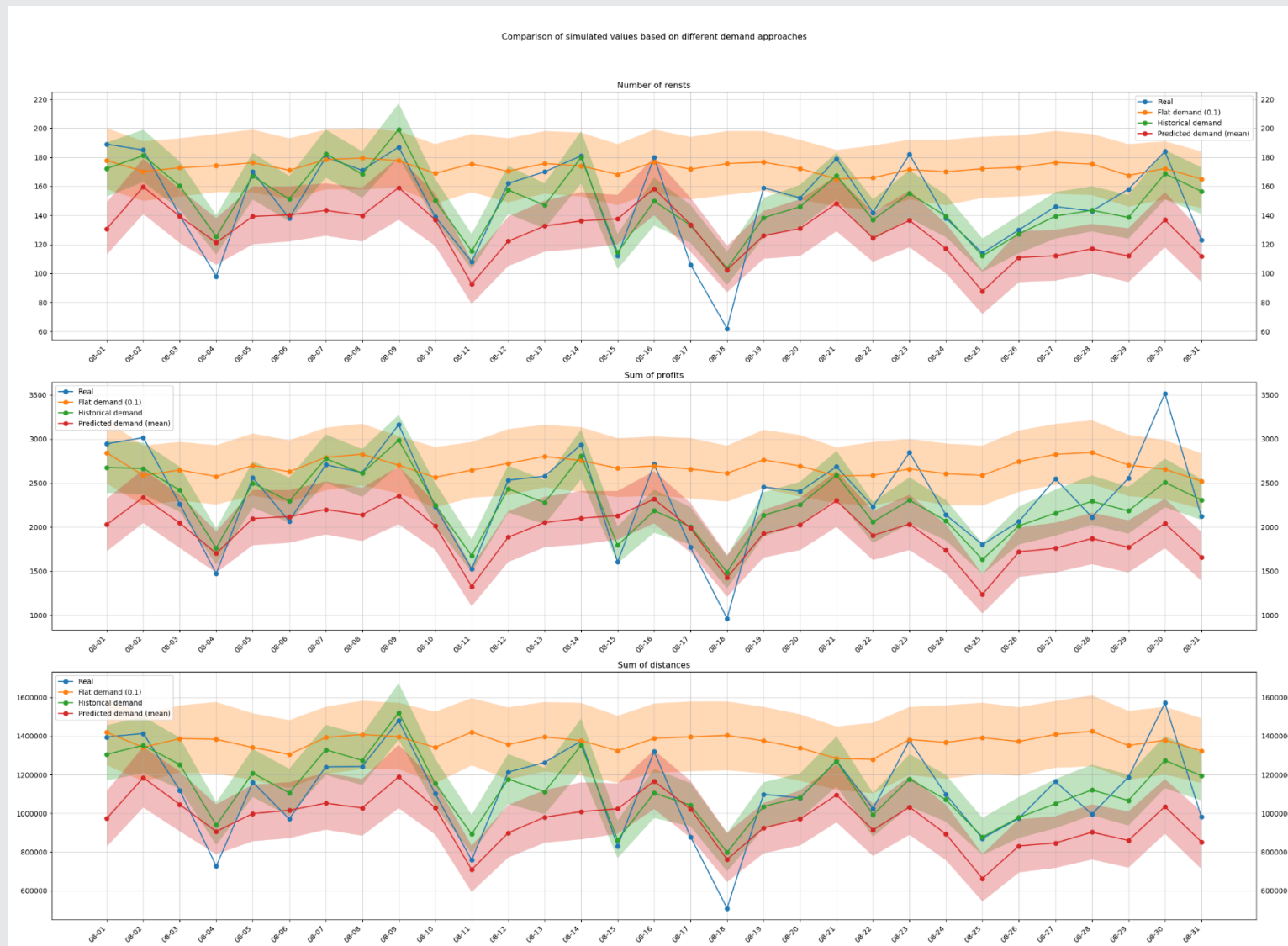
optimization of vehicle sharing services

- use of **data** from many different sources
- detailed spatio-temporal **demand prediction**
- advanced **simulation environment**
- **optimization** based on genetic algorithms

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Benefits of optimization and automation of cloud computing



- **Optimal use of resources** - we pay only for the resources and time actually used
- **Effective R&D process** - research team focused on research challenges, not application deployment
- **The use of multi-cloud and serverless** for parallel processing up to 3000 processes simultaneously

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