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Second Decision Science Alliance International Summer Conference, DSA ISC 2024, Valencia, Spain, June 6–7, 2024, Proceedings, Part II

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This book constitutes the proceedings of the Second Decision Science Alliance International Summer Conference, DSA ISC 2024, held in Valencia, Spain, in June 2024.

The 33 full papers and 38 short papers included in this book were carefully reviewed and selected from 101 submissions.

At the core of DSA ISC'24 are in-depth discussions and analyses across a spectrum of technological domains. Notably, experts shared their knowledge on areas such as Artificial Intelligence & Machine Learning, Mathematical Optimization, Operational Research & Management Science, Statistics, Simulation, and Decision Processes Analysis. Each of these areas represents a key aspect of decision science, contributing to the interdisciplinary nature of the conference.

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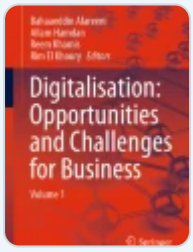

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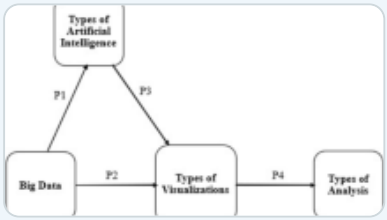

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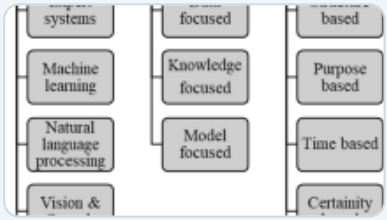

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Crowdsourced Project Selection in Tourist Spots with Voting in Smart Cities

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Decision Sciences

(DSA ISC 2024)

Surja Sanyal, Sajal Mukhopadhyay, Fatos Xhafa & Jaya Mukhopadhyay

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Abstract

The tourism industry is a valuable sector generating major income for nations. The local Government of a tourist spot may undertake several projects to be implemented for the benefit of tourism in that place. Currently, the authority of the local Government, involving their ministers, decides which projects are to be undertaken. Alternatively, the

local Government may involve, in a crowdsourced (crowdsourcing can be implemented with smart devices such as mobile devices also) manner with the technological support of smart cities, the local residents and the tourists in this process, leading to a more transparent and more engaging selection of projects. In this paper, a strategyproof, Pareto optimal, and scalable mechanism is provided to gather the preferences of the tourists, the residents and the ministers (with tunable weight parameters) for their most preferable choices of projects in the tourist spot and selecting the projects in such a manner so that the total cost of the selected projects is within the available budget.

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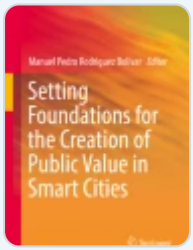

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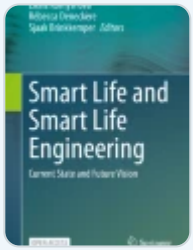

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Sustainable Tourism Development and Community Impact

Availability of Data and Code

Real data has been taken from OPEN DATA BARCELONA at https://opendata-ajuntament.barcelona.cat/data/en/dataset/est-cadastre-carrecs-us and has been cast to the simulation settings using Python libraries. The source data, the cast data, the Python codes and the generated graphs are available in GitHub at https://github.com/Surja-Sanyal/Crowdsourced-Project-Selection-in-Tourist-Spots.git.

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