Special Issue: Analytics & Artificial Intelligent for Social Goods

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Call for Papers

Special Issue of Operations Research Forum

Analytics & Artificial Intelligent for Social Goods

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Deadline: May 2, 2022

Background:

Social goods are products and services that can be provided by private enterprises, government institutions, or non-profit institutions. They benefit people with special needs, including older adults, those participating in sports, and young people. Social goods are related to healthcare, safety, sports, environment, democracy, computer science, and human rights. While there is a growing recognition by agencies, organizations, and governments that Operations Research (OR) and analytics tools can offer significant improvements to the societies they are working to improve, establishing a joint strategic vision for AI and OR that will maximize the societal impact of AI and OR in a world that is bound to undergo significant changes due to the COVID-19 pandemic, widening inequalities and challenges in resilience and sustainability in the food-water-energy nexus. Furthermore, the research on social good analytics for preventing the rise of crime, disorder, and authoritarian policing has been relatively slow and sporadic, both in academic publications and practical applications.

There has been strong historical interest from both the AI and OR communities on this topic, with a burst of AI activity in recent years in topics such as smart grids and optimized transport systems (both as part of a greater computational sustainability effort). In contrast, the OR community has long supported areas such as Public Sector OR (https://connect.informs.org/public-sector-operations-research/home). However, the grand challenges may be fundamental societal problems for which the AI and OR approach has significant promise and scientific advances that would fundamentally transform the view of both fields to the social goods issues. The grand societal challenges may be in areas such as resilient supply chains, sustainable energy, health care, and crisis management, equitable transportation, and the modeling of human behavior. AI&OR for

social good (AI&OR4SG) is a relatively new research field that focuses on tackling important social, environmental, and public health challenges that exist today.

Objective:

The goal of this special issue is thus to improve the research and practice in issues related to analytics AI and OR solutions for social goods (AI&OR4SG) by mutually benefit from practitioners, researchers, and policymakers international collaborations; promoting the development of new methodology and metrics to address the specific challenges related to analytics AI and OR solutions for social goods (AI&OR4SG); providing professional development to policymakers, and governmental decision-making at the legislative and strategic levels; analyzing for improving the management of government programs, services and operations; providing decision-making solutions in support of homeland security, law enforcement, emergency preparedness, and disaster response; gaining a better understanding of the available data, challenges in data acquisition, and the uncertainty present in the data used for decision making; addressing the ethical issues related to the use of technology for problems that impact society and support humanitarian assistance.

The topics of interest for this special issue are (but not limited):

- Innovative applications of data analytics to social issues like energy, healthcare, education, food, poverty, injustice, inequalities in society.
- Machine learning for applications for social good and collaboration.
- Application of data technologies and data science to social sciences studies in the digital realm.
- Social impact measurement of emerging services and social entrepreneurship through data and operations research.
- Social good frameworks and mechanisms enabled by data science research.
- Smart clusters identification for monitoring international and global social chain for both licit and illicit activities
- Multi-objective optimization, machine learning, and intelligent techniques for social sharing, media, and interaction.
- Security and privacy in analytics in social media.
- Co-simulation and other applications of simulation for social interaction.
- Decentralized approaches to data sharing applications, e.g. social media over blockchains or decentralized file systems.
- Sustainable social justice in an open world
- Game theory for evaluation of corporations in society in non-heterogenous environment
- Large scale optimization for modeling and evaluating large scale social impacts
- Modeling dynamic balance of service for demand among the all spheres of society
- Social good marketplace scheduling
- Resource allocation systems for social goods
- Applications of AI in fighting against covid-19 and future pandemic
- Humanitarian and disaster management
- Cybersecurity issues in social goods

- AI based-Mathematical modeling and optimization of social innovative service systems
- AI Ethics
- Market segmentation in online platform
- Spatio-temporal point processes with attention for social goods modeling
- IoT and sensor allocation for security management

The social goods related sectors, activities, and topics are included (but not limited):

- Health and Healthcare
- Wellbeing
- Humanitarian and disaster relief operations
- Agriculture
- Education
- Social Services
- Poverty
- Homelessness
- Inequality
- Sustainability
- Environment
- Transportation
- Fraud, collusion, and corruption
- Government
- Public safety, criminal justice, and security

Submission Instructions:

Papers should be submitted at the Operations Research Forum

Forum website: https://www.editorialmanager.com/orfo/default.aspx

Select Article Type: Manuscript

Upload your files: When the system asks, "Does this manuscript belong to a special issue?" reply: Yes, then choose the option **"Analytics and AI for Social Goods"**

Complete the submission process as required.

The papers will be reviewed according to the editorial policy & standards of Operations Research Forum. The papers should be original, unpublished, and not currently under consideration for publication elsewhere. Prior to submission, please ensure that your paper adheres to the journal's author guidelines, which can be found at:

https://www.springer.com/journal/43069/submission-guidelines