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Supervisor Expression of Interest MSCA - Marie Sklodowska Curie Action - (PF) Postdoctoral Fellowship 2023

Supervisor name: Deborah Agostino

Email address: deborah.agostino@polimi.it

Link “Pagina docente”: <https://www.som.polimi.it/professor/deborah-agostino/>

Department Name: Department of Management, Economics and Industrial Engineering

Research topic:

MSCA-PF Research Area Panels:

- ECO_Economic Sciences
- ENG_Information Science and Engineering
- ENV_Environmental and Geosciences
- LIF_Life Sciences
- MAT_Mathematics
- PHY_Physics
- X SOC_Social Sciences and Humanities**
- CHE_Chemistry

Brief description of the Department and Research Group (including URL if applicable):

The Department of Management, Economics, and Industrial Engineering (DIG) of Politecnico di Milano was established in 1990. Its mission is to have a positive impact on society by creating and sharing knowledge at the crossroads between engineering, management, and economics. To this end, it engages in outstanding research, high quality education, and service to the community. Specifically, DIG pursues scientific excellence by adopting a tailored approach which relies on multi-disciplinarity, diverse methodologies, and intense connections with practitioners and policymakers. With approximately 140 professors, DIG is one of the largest departments of Politecnico di Milano.

More information can be found at: <https://www.som.polimi.it/en/>

DIG HumanTech program has been selected and funded by the Ministry of University and Research (MUR) for the period 2023-2027 within “Dipartimenti di Eccellenza” (Law 232/2016), the ministerial initiative aimed at rewarding the departments that stand out for the quality of their research and at financing specific development projects.



POLITECNICO
MILANO 1863

In particular, the objective of HumanTech is to redefine the relationship between technology and human beings so as to enable a sustainable digital transition of industrial systems. The project aims to propose new models and processes for the development and adoption of technologies, capable of accelerating the transition towards sustainable, inclusive industrial systems that make individual and collective well-being a priority.

Within the department, Professor Deborah Agostino is part of the ReMAPS (<https://www.remaps.polimi.it/about/>) group, specialized in the analysis of the interconnections between digital technologies and public service delivery, with a particular emphasis on the assessment and measurement of public service performance and accountability.

TITLE of the project: *Artificial intelligence for inclusive and sustainable public services*

Brief project description:

The present research initiative is developed in the context of the “HumanTech – Humans and Technology” project.

Artificial intelligence (AI thereafter) is increasingly adopted for public service delivery. Individuals are constantly using AI driven technology to search, access, exploit and then assess public services. Public sector institutions are also striving to explore AI solutions to improve service design, delivery and assessment. AI has thus the potential to re-shape the whole process of service design, delivery and the ways in which public value is generated, finally contributing to the development of a more inclusive and sustainable society.

This creates new opportunities as well as threats. On the one hand, AI can empower individuals and communities, and increase the opportunities for more personalized and demand-driven public services. AI can also facilitate the delivery of dematerialized public services. Both these dynamics of empowering individuals and dematerialization of service can contribute to the inclusion of citizens in more democratic processes as well as contribute to the development of more sustainable communities.

At the same time, AI can also reproduce existing forms of discrimination, jeopardizing the fairness of processes; and their inscrutability and opacity can reduce citizens’ trust on and legitimacy of democratic institutions. All in all, AI can contribute to re-shape the design, delivery and assessment of public services, and how citizens perceive public service performance, in terms of quality, efficiency, effectiveness, equity, accountability and transparency.

Given this background, *the objective of the project is to explore the role of AI for the development of inclusive and sustainable public services.* Preferred public services for the analysis are cultural and touristic services, which are significantly leveraging on AI solutions to increase cultural participation and offer new and more personalized services. Possible research questions include the following: how do individuals/citizens perceive the value of AI-driven public services in terms of efficiency, effectiveness, equity, equality? How do public officials manage the process of implementing AI within their institutions? Which are the expected outcomes of AI-driven public services in terms of inclusion and sustainability? Which are the barriers and drivers connected with the adoption of AI systems in public sector organizations? To what extent AI solutions can enhance the measurement of performance of public services and their accountability?



POLITECNICO
MILANO 1863

This research project can be exploited with both qualitative and quantitative investigations. On the one hand, qualitative methodologies support the investigation on “how” and “why” public sector organizations and citizens are facing the challenges brought about by AI. On the other hand, quantitative methodology can exploit AI techniques to better understand the perceptions of individuals and public officials of the benefits, treats and challenged enhanced by AI.