ARTIFICIAL INTELLIGENCE

MUR DM 118 - Artificial Intelligence for the Prevention and Reduction of Environmental and Climate Risks and Greenwashing

Funded By	UNIVERSITA' POLITECNICA DELLE MARCHE [P.iva/CF:00382520427] MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584]

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Context of the research activity	The research has the task of supporting institutional planning through the experimentation of innovative instruments to orient business activities towards the pursuit of more sustainable conduct in terms of preventing environmental and climate damages through identifying and reducing relevant risks taking advantage of the opportunities offered by Artificial Intelligence. Progetto finanziato nell'ambito del PNRR – DM 118/2023 - E14D23001810006

	It is now well known that Artificial Intelligence (AI) can help mankind to face the major global challenges related to climate change, environmental and air pollution, and the occurrence of catastrophic events.

Nowadays, climate informatics, which uses AI to refine weather forecasts, can improve our understanding of the effects of climate change through specific calculations. Moreover, AI can analyze real-time data on catastrophic weather events, wherever in the world they occur and offer solutions to prevent disasters by providing early warnings and coordinating emergency management. In addition, with particular regard to business activities, companies can use AI systems to automatically monitor their emissions in order to forecast future emissions on the company's CO_2 footprint in relation to current reduction efforts, new methodologies, and future demand, and to set and adjust reduction targets very accurately. Artificial intelligence can enable the development of a new generation of products and services. In fact, it can offer more fluid and optimized sales paths, improve machinery maintenance, increase both production and quality, improve customer |

Objectives	service, and save energy. AI can also be applied to public services. It can reduce costs, offer new options in public transport, education, energy, and waste management, and improve product sustainability. Finally, AI systems may have the capacity to process data on sustainability claims made by companies in order to verify their possible correctness in terms of their impact on the environment. AI could, therefore, effectively contribute to facing the so-called 'greenwashing', in line with the objectives pursued by the European Union in its recent Proposal for a Directive on substantiation and communication of explicit environmental claims (so-called 'Green Claims Directive') of 22.3.2023.

For this reason, AI would contribute to achieving the objectives of the European Green Deal.

In this context, the role of regulatory and supervisory authorities is crucial, so it is necessary not only to reconstruct and interpret the national, international, and European regulatory framework of reference but also to devise and adopt innovative strategies in order to orient business activities towards the pursuit of more sustainable conduct in terms of preventing environmental and climate damage, through the identification and reduction of relevant related risks as well.
The research has the task of supporting institutional planning through the experimentation of innovative instruments in order to identify and limit environmental and climate risks by taking advantage of the opportunities offered by the use of AI systems tools.

In fact, Artificial Intelligence can assist companies and governments in tackling the planet's major environmental and climate challenges.
However, artificial intelligence technologies for environmental sustainability also contribute to the problem of carbon dioxide emissions on a global scale. For example, it has been estimated that GPT-3, the OpenAI's model language, produces the same amount of gas as a car that travels more than 700,000 kilometers. And the latest version of this language model, GPT-4, also used by Microsoft, is even more complex and will therefore consume even more. Therefore, the increasing adoption of AI solutions globally requires tools and solutions to mitigate the negative impacts of such technology on climate and the environment.
If that is the case, it becomes clear, from a legal point of view, that the functioning of Artificial Intelligence involving legal effects must be controlled to ensure that it produces outcomes in line with our legal system. This control must take place through the interpretation of the acts generated by the application of AI and the control over the impact of intelligent systems on the environment and climate. It cannot be sufficient, even if indispensable, to rely on the right to access the code or to implement security measures.
The research must therefore have the objective of clearly bringing out what the future programming must be in the regulation of artificial intelligence systems in order to balance its advantages with the risks associated with fundamental values of the Italian-European legal system, with particular regard to the protection of human person and environment.
The achievement of the objectives of the present research requires carrying out research in companies, research centers, or Commissione Nazionale per le Società e la Borsa (CONSOB) by a minimum of six (6) months to a maximum of twelve (12) months. It is also necessary to carry out study and research activities abroad for a minimum of six (6) months to a maximum of (18) eighteen months. |

Skills and competencies for the development of the activity	The perfect candidate should have significant legal or artificial intelligence skills. In any case, the candidate must have followed or be available to follow a course on "Artificial Intelligence" or "Data Science".