Short Communication

# Design of an advanced methodology and integration of the ethical factor for the design of AI-based models.

Ricardo Reir*, Luis Miguel Garay Gallastegui

*Catholic University of Avila, SPAIN*

***Statement of the Problem:***

*Data systems and AI-based algorithms can be deployed at unprecedented scale and speed. Unintended consequences will affect people with the same scale and speed. Developers of AI-based models, as well as data analysts and scientists, have an ethical responsibility for the systems they create and their unintended consequences.*

***Methodology & Theoretical Orientation:***

*There is an urgent need to identify methodologies to design such AI- based systems that will drive technological innovation and not slow down the development of large-scale AI while meeting the innate ethical requirements applicable to individuals and demanded by today's society. We need more than our own values and these guidelines (be fair, provide explainability and transparency, be safe and secure) to get there. In the current state of the market, it is necessary to teach all stakeholders in AI-based systems to design with methodologies that ensure ethical and autonomous behavior of such systems.*

***Findings:***

*A methodology is developed to ensure the ethical design of intelligent systems, based on simple and up-to-date technological design principles, as well as specific activities with an integral vision of the IA-project. It includes continuous improvement cycle with feedback from unexpected outcomes and newly discovered consequences as opportunities.*

***Conclusion & Significance:***

*Own values, good human-centered practices and guidelines are no more enough to mitigate potentially harmful consequences and bias. They need to be implemented in each specific IA initiative and this is not obvious. This proposed methodology provides an advanced and integrative methodological framework for design IA projects.*