World Academy of Science, Engineering and Technology International Journal of Computer and Information Engineering Vol:18, No:04, 2024

Ethical Issues in AI: Analyzing the Gap Between Theory and Practice - A Case Study of AI and Robotics Researchers

Authors: Sylvie Michel, Emmanuelle Gagnou, Joanne Hamet

Abstract: New major ethical dilemmas are posed by artificial intelligence. This article identifies an existing gap between the ethical questions that AI/robotics researchers grapple with in their research practice and those identified by literature review. The objective is to understand which ethical dilemmas are identified or concern AI researchers in order to compare them with the existing literature. This will enable to conduct training and awareness initiatives for AI researchers, encouraging them to consider these questions during the development of AI. Qualitative analyses were conducted based on direct observation of an AI/Robotics research team focused on collaborative robotics over several months. Subsequently, semi-structured interviews were conducted with 16 members of the team. The entire process took place during the first semester of 2023. The observations were analyzed using an analytical framework, and the interviews were thematically analyzed using Nvivo software. While the literature identifies three primary ethical concerns regarding AI-transparency, bias, and responsibility—the results firstly demonstrate that AI researchers are primarily concerned with the publication and valorization of their work, with the initial ethical concerns revolving around this matter. Questions arise regarding the extent to which to "market" publications and the usefulness of some publications. Research ethics are a central consideration for these teams. Secondly, another result shows that the researchers studied adopt a consequentialist ethics (though not explicitly formulated as such). They ponder the consequences of their development in terms of safety (for humans in relation to Robots/AI), worker autonomy in relation to the robot, and the role of work in society (can robots take over jobs?). Lastly, results indicate that the ethical dilemmas highlighted in the literature (responsibility, transparency, bias) do not explicitly appear in AI/Robotics research. AI/robotics researchers raise specific and pragmatic ethical questions, primarily concerning publications initially and consequentialist considerations afterward. Results demonstrate that these concerns are distant from the existing literature. However, the dilemmas highlighted in the literature also deserve to be explicitly contemplated by researchers. This article proposes that the journals these researchers target should mandate ethical reflection for all presented works. Furthermore, results suggest offering awareness programs in the form of short educational sessions for researchers.

Keywords: ethics, artificial intelligence, research, robotics

Conference Title: ICIM 2024: International Conference on Information and Management

Conference Location : Nicosia, Cyprus Conference Dates : April 25-26, 2024