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T-AI-LOR MADE FOR SPACE: ADOPTING AI STANDARDS IN THE SPACE SECTOR

Abstract

As Artificial Intelligence (AI) continues to proliferate throughout the space sector, the establishment and adoption of norms and standards for responsible and sustainable AI development and deployment throughout the sector is becoming increasingly necessary. Currently there is scarce guidance regarding AI development and deployment in the space sector, with both the United Nations Space Treaties and national space law regimes lacking AI-specific provisions. The primary source of binding rules for the foreseeable future comes from industry agnostic AI regulations such as the EU's recently enacted AI Act. However, the apparent incongruency between global AI regulations, particularly the EU's AI Act and the new U.S administration's policy objectives, makes it difficult for operators in the space sector to ensure that their systems are interoperable between markets and raises potential compliance costs. Regardless of the direction other sectors take, the space sector is inherently international and must priories the harmonisation of practices and processes between jurisdictions to ensure safety and sustainability of operations into the future.

This paper discusses the need for a consistent and internationally applicable source of guidance for operators in the space industry developing and deploying AI enabled systems. In line with the findings of the associated PhD research, this paper recommends not only aligning operations with the EU's recently enacted 'AI Act', but also the adoption of international AI standards such as those originating from the ISO and IEEE, that are indispensable in mitigating risks in the face of a nascent regulatory environment. While there are currently no AI standards tailored to the space sector, industry agnostic standards would provide utility in most cases. This paper advocates for the adoption of industry agnostic AI standards in the space sector as a means to harmonise practices between jurisdictions and better enable regulatory compliance with binding regulations (such as the EU's AI Act) going forward. Beyond this, this paper also argues that the space sector's active participation in developing standards related to AI is imperative to ensure their nuanced applicability to operations in the space sector. Additionally, this paper contends the need for a widespread awareness campaign and resources for professionals in the space sector (regardless of discipline) to educate professionals about potential issues and risks surrounding the use of AI in the space sector, as well as risk mitigation strategies to address them and comply with any relevant AI regulations.