Exploring the ethical and societal concerns of Generative AI in Internet of Things (IoT) environments

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Abstract. Generative Artificial Intelligence (Generative AI) and the Internet of Things (IoT) are two rapidly evolving technologies that have the potential to revolutionise many aspects of our lives today. Generative AI, a subset of AI technologies, has a unique ability to create and manipulate content based on patterns learned from vast datasets, and when combined with the interconnected nature of IoT devices, they hold great promise across industries. Leveraging deep learning capabilities, Generative AI can intelligently analyze and apply the vast amounts of data generated from the internet to optimize operations and drive innovation. However, the potential integration of Generative AI and IoT systems in the future could raise notable ethical and societal concerns. These may encompass worries about privacy, security risks, biases and fairness challenges, lack of autonomy and human control, and emerging issues like the lack of ethical content creation. Given the relatively new nature of Generative AI technologies, this paper explores the ethical and societal concerns that may arise should Generative AI and the Internet of Things (IoT) environments integrate. By shedding light on these ethical and societal concerns, this research seeks to stimulate a nuanced understanding of the critical balance between technological advancement and responsible deployment, guiding stakeholders towards an ethically sound integration of Generative AI within IoT ecosystems.

Keywords: Generative AI, Artificial Intelligence, Internet of Things.