



A Boolean Approach for Computational Design of Ethics

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Description

IoT is a paradigm shift in our understanding of networking that endeavors to connect even ordinary things to the internet. Ordinary things, are embedded with sensing, communication and processing abilities. The data collected by smart devices is processed in order to provide advanced class of services. IoT offers a huge applications market like smart healthcare, smart transportation systems, smart grid and so on. Given the vast range of applications IoT offers, it has the potential to transform our society. Notwithstanding the benefits IoT promises, ever-increasing presence of smart things that are able to collect huge amount of personal and social information raises ethical concerns. This is particularly true when smart devices are endowed with artificial intelligence capability to execute decisions autonomously. Ethics symbolize the collection of beliefs, values and morals of a given society that serve as guiding principles for amicable mutual coexistence. Ethics, morality and culture serve as essential vehicles for smooth functioning of any society.

As devices become more pervasive in our personal and social lives, they need to function in an ethically consistent manner. Autonomous decision-making on the part of machines that involve arbitrary ethical decisions may disrupt social order and lead to technological chaos. While a smart device is a logicaldecision-making device, it does not mean autonomous decisions taken by smart devices should be disconnected from human agency. Smart devices do not operate in isolation; rather decisions they take have a bearing on entities external to the device as well. The way smart devices operate and execute ...

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