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Reflective Activity 1: Ethics in Computing in the age of Generative AI

Generative AI has been on the rise in recent years, with text generating models like ChatGpt and MetaAI showing some of the abilities of these large models. As much as there are immense potentials on offer, these technology poses significant ethical challenges, such as the prospect of having fake identities imposed on compromising images for the purpose of character defamation and propaganda (Rana et al, 2022).

Countries across the globe are concerned by the challenges inherent in the use of generative models and are coming up with various cultural, political and economic approaches to combat the potential ethical issues involved.

Deckard,R. (2023) and Correa et al (2022) outlined a number of tips towards ensuring ethical standards are maintained in the use of generative AI. He explained the need for a union of ethics and technology, as this would ensure that technology experts are also well grounded in the understanding of philosophy, ethics, and social sciences, which would ensure they are not bias in their development of technological models. It is also crucial that AI professionals and enthusiasts collaborate with other disciplines and participate in Public Policy Discussions. This will enable stakeholders address practical solutions from differing perspectives. It is not unfounded to see technologists get engrossed in their solution development that they lose track of the impending danger it could pose to the society if handled by wrong hands.

When generative AI fails to consider the public good, it is violating Principle 3.1. of the Association for Computing Machinery's committee on Professional Ethics (ACM, 2018). To combat this challenge, it is important that Engineers and technologists are not only computer science majors, but also required to take courses in philosophy and ethics.

Also, the BCS Code of Conduct (2022) emphasizes principles such as ensuring the public interest, prompting professional competence and maintaining integrity as a standard for other nations to follow in the adoption of generative AI as a solution.. Failure to intervene by governing computing bodies contradicts the Principle 3 "Show what you know, learn what you don't (number 6)" of the BCS Code (BCS, 2022), which calls for professionals to consider the wider implications of the negligent action or inaction on society.

Furthermore, I believe it should be required of research institutes and industry giants to set up an ethical review department or committee, that oversees and observes the operations of their technological solutions.

A review of these journals and research reports has been a great experience in discovering some of the important non-computing courses that should be included in the curriculum of Engineers and Scientists so as to ensure they are morally equipped for providing solutions to real-life applications in the most ethical way possible.

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Reflective Activity 2
Case Study: Inappropriate Use of Surveys

We were tasked with reviewing the 2018 incident of Cambridge Analytica's use of data obtained from Facebook on its users through surveys. This activity was done invididually as students were required to find other examples of inappropriate use of surveys and highlight their impact from ethical and professional standpoints.

In 2018, it was revealed that Cambridge Analytica, a political consulting firm acquired data from millions of Facebook users without their explicit consent. This data was obtained through a personality quiz app and although only around 270,000 users directly interacted with the app, the app also harvested data from their Facebook friends, thereby increasing the amound of information collected. This data was then used to build profiles of users to influence voter behavior in the 2016 U.S. presidential election and the Brexit referendum in the UK (Kanakia, 2019).
Cambridge Analytica used the data to create targeted political advertisements and messages that could sway public opinion in the direction they wanted. By understanding the preferences of individuals, they could tailor their communications and thereby, manipulate electoral outcomes.

A slightly similar experience was in 2012, when Target, a major retail chain, monitored and collected the purchasing data of customers and used predictive models to identify pregnant customers for the purpose of recommending products in that category to them. It was observed that customers under this classification got advertisements of products relating to parenting and child bearing/raising even before they had publicly announced to family and friends that they were pregnant (Duhigg, 2013).

A School-based alcohol, tobacco, and other drug use (ATOD) survey received mixed social media feedback based on perceived inappropriateness of some of the questions asked (Gassman, 2019). Based on the outrage on social media, what should have been a learning and correctional experience for students and other young adults on the misuse of drugs, became an issue of ethical misappropriation.

As much as these may be applaudable feats in technological advancement, it shows a number of misappropriations. From the ethical standpoint, there is a violation of consent as well as manipulation, as unsuspecting users were targeted and their information – sometimes, personal – compromised.
Socially, this could have a psychological impact on the individuals who may have received unsolicited advertisements based on their preferences at one point, which may result in experienced stress, anxiety, or a sense of violation. For example, a user who shopped for pregnancy kit or antenatal drugs but suffered a miscarriage could become hurt or depressed if pregnancy-related advertisements come up a few months later.

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Legally, affected individuals may file law suits which can result in significant financial and reputational damage to the companies involved. The Cambridge Analytica scandal prompted legal actions and fines for Facebook. Following this suits, a large number of users deleted their account from the social network (Brown, 2020).

While there are a number of ethical wrongs recorded, I have learned that some of these experiences are needed to facilitate the introduction of strict data protection regulations (Hoofnagle, 2019). Also, users become more aware of their digital footprint and learn to act accordingly.

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