Stream 2 – Ethics education / Ethics and students
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Building a 'moral operating system' for IT students: pedagogies and problems

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Abstract

In this paper, we will discuss the obstacles, lessons learnt, and innovations in pedagogy in delivering the subject, Topics in Information Technology Ethics, which is the applied professional ethics subject for the Masters in IT at CSU. It is also, more broadly, a mandatory subject for all Computer Science degrees in Australia, under the auspices of the Australian Computer Society (ACS). As part of this discussion we examine the present ethical landscape in the IT industry and outline how we prepare students to enter the industry with independent ethical agency. It is the contention of the presentation that argument, reasoning, and logic skills are the seminal learning proficiencies required for students to enter the dynamic ethical landscape of the digital economy, although this is not without limitations.

Indeed, ethics is now the 'wicked problem' in the IT field as there is a developing international 'tecklash' against the industry led by specific high-profile incidents (i.e. Cambridge Analytica and the Christchurch massacre) and public concern for privacy, transparency, and dysfunctional digital markets. The Australian, New Zealand, EU, and US governments have responded with strict new regulation, including fines for violation of privacy, distribution of inappropriate harmful materials, and copyright infringement.

Graduate Computer Scientists entering into this complex new domain of enforceable ethical practice may face legal or other action if they are in breach of new and proposed laws regulating the industry. It is in the interests of the Australia Computer Society, the broader industry, and educators in the field to prepare students for the ethical challenges they face, as is already the case with other more established fields such as Accounting and indeed, Higher Education. Damon Howiwtz (2014) put it succinctly, stating that what the IT industry needs is a better 'moral operating system' to guide ethical decision making to face today's looming challenges.

One evident way to certify that students are prepared for 'ethical practice' in the industry is to ensure that their ethical judgement is sound and reasoned (Tavani, 2015). We teach ethical reasoning and judgement skills through a number of means; case studies, scenarios, and interactive YouTube videos of ethical dilemmas with multiple outcomes. At CSU we have pioneered a way of streamlining ethical decision making through the Doing Ethics Technique, an early innovation developed by academics in the subject, to build reasoning skills in systematic and logical way (Simpson, Nevile, Burmeister, 2003). Recently we have been using argument mapping software to allow student to map ethical arguments in imminent ethical dilemmas enabled by the rise of Artificial Intelligence and autonomous vehicles. This has had mixed results in terms of digital pedagogy and assessment outcomes (MindMup, 2019). This is because the leap from classical ethical theories to contemporary ethical problems is difficult for many students (although the link is more apparent between Foots seminal ethical dilemma "the trolly problems" (1967) and rogue autonomous vehicles).

Together, we will discuss the contemporary problem of teaching ethical reasoning and logic in an IT ethics class and our advances in the area.

References

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