NIFTY ASSIGNMENTS: ETHICS IN ARTIFICIAL INTELLIGENCE USING ROBOT-BASED MOVIES

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Abstract

Supported by a 2010 Ripon College Summer Ethical Leadership Faculty Grant, I developed a course component on ethics to be incorporated into CSC371 Artificial Intelligence. One of the novel aspects of this was an assignment requiring the students to identify and discuss ethical situations that occur in robot-based movies.

1 Ripon College Ethical Leadership Program

The Ripon College Ethical Leadership Program (ELP)[1] provides students with many opportunities to make considered decisions by applying ethical standards in all academic and everyday activities. It is important for students to integrate ethical discussion with action in all aspects of their lives. To this end, all academic departments are encouraged to incorporate relevant ethical issues into the curriculum. I received a 2010 Summer Ethical Leadership Faculty Grant from the college to add a component on ethics to CSC371 Artificial Intelligence for Fall 2010.

2 2010 Summer Faculty Grant

A course on Artificial Intelligence should cover not only the technical aspects of making programs and machines "smart" in some self-sufficient way, but also the positive and negative implications of AI technology on everyday life and the responsibilities of computing professionals in designing, developing, and using AI technology.

During summer 2010 I read novels and viewed movies that incorporated AI and ethical situations. I discerned a pattern that most authors and playwrights viewed robotics and artificial life as the most interesting part of AI to investigate. I modified my course to include several discussions on ethics in general, ethics pertaining to the use of technology and AI, and then specifically, on ethics pertaining to the area of robotics and artificial life.

3 CSC371 Artificial Intelligence

During Fall 2010, I incorporated a variety of activities:
- class discussion on ethics, legality, and how AI technology relates
- class discussion of the Eliza project by Weizenbaum[2] and of the Turing[3] test
- class viewing and discussion of the movie *Game Over[4]*
- class discussion of Capek's[5] play *RUR* and the article *Darwin Among the Machines* by Butler[6]

3.1 The Nifty Assignment

The culminating activity for this ethical component of the course was a group project reviewing Isaac Asimov's[7] book, *I, Robot,* and a selection of robotic/artificial life based movies (*2001 A Space Odyssey*[8], *War Games*[9], *Stealth*[10], *Metropolis*[11]*, The Matrix*[12], *Eagle Eye*[13], *AI*[14], *I, Robot*[15]*, Wall-E*[16]). Each group of 3 or 4 students was assigned three chapters of the Asimov book and three movies. They summarized the plots of their assigned films and chapters, described the AI technology featured, and identified ethical situations that occurred and their resolutions. They

presented this information to the class and showed relevant movie clips. The students also prepared individual papers.

The students were enthusiastic about the assignment, planning movie dates to watch the films together. Each group had to organize their presentations, giving each group member sufficient responsibility and ensuring that each group's talks would fit into a 20-minute time slot. Writing and speaking skills were emphasized in this activity, as well as demonstrating an understanding of ethics and knowledge of AI.

3.2 Critique and Future Plans

As can be expected, class discussions on abstract concepts like ethics and legality were rather dry. Students were more engaged in discussing the Eliza program and the Turing Test. They were very disinterested in Capek's play and Butler's article. The class was intrigued by the movie *Game Over* and was very engaged in the discussion. Not surprisingly, they enjoyed viewing the films and discussing them. The one exception was *Metropolis*; the group who viewed it found it very bizarre. I was surprised that they on the whole did not really find the *I, Robot* book by Asimov very interesting. The resulting papers were insightful; the students found complex issues linking AI technology and ethical behavior.

I would definitely include the ethical component in this course again, making some minor changes in the movie and book list to include some newer choices.   I would allow 30 minutes for each group's presentation. Twenty minutes was too short, especially with time needed to queue up clips from the films.

References

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