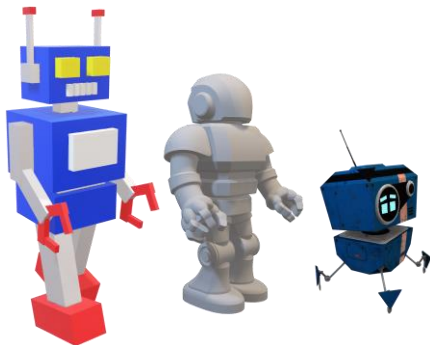
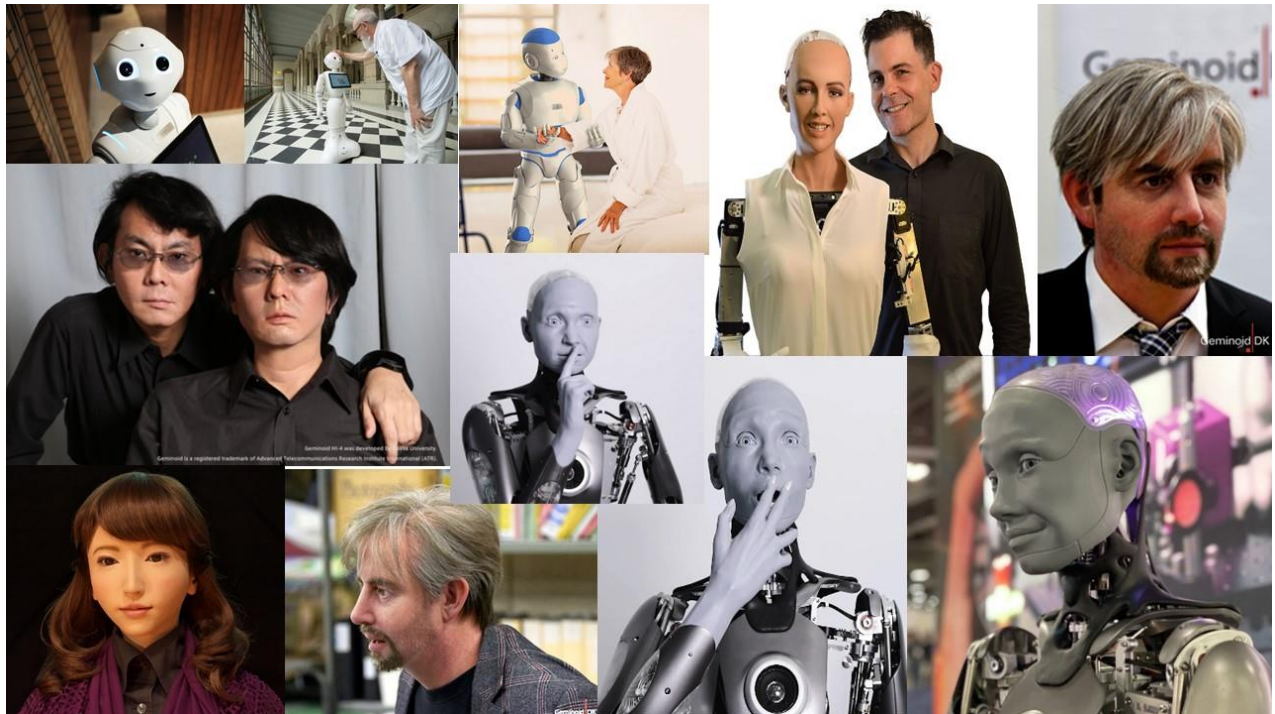


Ethical Dilemma of Social Robots

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Ethics of AI and Social Robots



Semester Project: Ethics, Values, and Technology

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First internet and now Artificial Intelligence (AI) is revolutionizing the way we live today, and the matter of fact is, very soon, we will see that ROBOTS will be an essential component of an advanced civilization. But for the time being, the world has not even stepped the initial step towards Advanced Robotics and the robots we are used to seeing in Sci-Fi movies are not even close to reality and the robots that are distinguishable from humans are still too far from reality.

The world has become digital and once we take the first step then there will be a boom, rapid growth in the development of advanced robotics moreover it will open up the way to ethical problems and dilemmas. Emotional and Social Robots are already being used in healthcare and will be ubiquitous very soon so, the ethical analysis of Social Robots is necessary to regulate the use of these objects which can simulate dialogues, appear to feel emotions and be capable of learning. According to a report, on average, there are five hundred thousand (500,000) new industrial robots are installed every year and due to increasing demand, this number will go much bigger over the next couple of decades. According to a recent study by the McKinsey Global Institute (2013) says that the robotics industry is currently growing rapidly and predicts that the market value for advanced robotics will become more than 17 trillion US dollars per year by 2025.

The term robot has no fixed and predefined meaning, the meaning can be different from person to person, but the word is derived from the Slavonic language '*ROBOTA*' means "Forced Labor". Term Robot referred in Karel Capek's play as the mechanical humans made of Gold who used to serve the Hephaestus, Greek Hephaistos. Leonardo Da Vinci's journal contains the detailed plan of the construction of a robot that can sit, stand, move its arm, head, and mouth just like a human whereas the first real industrial robot *UNIMATE* was built in 1954 by the father of robotics (Joseph Engelberger) and used in 1961 by the General Motors to pick and place heavy

objects. Isaac Asimov, the inventor of the term *robotics* has put forward the popular *Three Laws of Robotics* published in a short story 'Runaround' in 1942.

- A Robot may not harm a human.
- A Robot must follow instructions of a human unless an unlit the first law violates.
- A Robot must protect itself while not violates the 1st and 2nd law.

We can conclude that mankind is superior to robots and robots are supposed to follow human instructions until and unless it is not harming any other human. From the philosophical point of view, if we just think under materialism, can robots and humans be equal? Does a robot have to give its life to a human? Does a human have to give his life a robot? Would the living robots be superior to their makers (Humans)? Most materialistic minds like Aristotle (Greek philosopher), believe that one day, robots will become a life forms like plants, animals, and humans.

As you can see how important robots are for the society and it is a hot topic of today's research and robot ethics is a rising multidisciplinary study endeavor that wants to understand the ethical connection and repercussions of Robo-Tech, particularly autonomous robots. It is generally located at the crossroads of ethics and robotics. Researchers, industrialists, and thinkers from the fields of robotics, computer science, psychology, law, philosophy, and others are having the difficulty with the ethical issues surrounding the development and deployment of robotics technology in the society.

Most of the sub fields of robotics are touched, particularly those that include robots interacting with people (Human Robot Interaction-HRI), such as care of old people and medical robotics, as well as robots to rescue and search different objects, including military robots, and other types of service robots. Moreover, the military robots were initially at the forefront of the discussion like whether and when the autonomous robots will be asked to use the lethal force?

The impact of the other types of robots, especially the Social Robots, has gain more and more fame in the recent years.

Basically, Robots are of Two types

- Fixed Robot
 - ❖ Industrial Robotic Manipulator (Robotic Arm)
- Mobile Robot
 - ❖ Unmanned Aerial Vehicle.
 - ❖ Autonomous Underwater vehicle.
 - ❖ Autonomous Surface vehicle.

Mobile robots are classified on the basis of their operation, end effector and nature.

The research and development on Industrial Robotic Manipulator and Autonomous vehicle are on its peak and number of industrial robots are increasing day by day, whereas social robots will used very commonly in the future due to their promising advantages and wide range of applications and abilities and they will be the best companion for human. Sofia, Geminoid, Ameca, and (Siri, Alexa, and Cortana) are the most popular type of social robots and the Research and development of the social robots is a hot topic among the researchers and industrialist for the better future. Basically, a social robot can make you a cup of coffee, bring you a glass of water, can go to the market to get your things, can be your companion, and can teach, play, and spend time with your kids.

Sooner or later a time will come when humans will be highly dependent on social robots. Along with the R&D of these robots we have to take care of the ethical issues and problems that we can face in the future so that we can design, program, and use social robots on the domestic level without being worried about the ethical aspects. Haven't we converted the human

mind/brain into a robotic being to an extent that we now are used to see robots as our functional equivalent, at least in the literature? These contemplations and the inquiries to which they give rise structure the foundation to the meeting “Robo-Philosophy” 2014—Sociable Robots and the Future of Social Relations (August 20–23, Aarhus University, Denmark), of which this extraordinary issue is an offspring.^{2,3} The gathering and its hypothetical foundation was brought about by Johanna Seibt as the first of a progression of five half-yearly meetings expected to track down the right responses to the inquiries above.

In practice, the conference functioned as an impetus to the possibility that thinkers should join the generally existing endeavors of roboticists in investigating fake social offices. More, the meeting showed that philosophical reflection on friendly advanced mechanics relates to all efficient areas of reasoning, not exclusively to morals, which had connected with this subject for quite a while, yet additionally to the way of thinking of cognizance, metaphysics, epistemology, theory of science, philosophical humanities and feel, theory of culture and intercultural reasoning, political way of thinking, and even to theory of religion. Truth be told, since the 2014 meeting, it has become evident that to comprehend the groundbreaking possibilities of human-robot communications, the quick improvement of social advanced mechanics requires a coordinated exertion in way of thinking as well as across the Humanities.

‘Social robots’ are designed to enter the space of human social interaction both physically and semantically, presenting a new type of ‘social’ agent, ‘social robotics’ has been aptly classified as “disruptive” technology, i.e., as a sort of technology that affects the core of our current social practices and might lead to profound cultural change.

Moral issues presented by friendly robots at the broadest level can be ordered into two gatherings: (1) the extension or cutoff points of profound quality, i.e., questions concerning the

fitness of social robots as moral specialists or potentially as the objects of moral thought; and (2) considerable standardizing questions, i.e., inquiries regarding the allure or admissibility of planning, delivering and additionally sending social robots in explicit cooperation settings.

There are a few parts of ethics and morality. A standard three-sided breakdown parts the field into metaethics, applied ethics, and regularizing ethics. The second and third branches directly connect to our RoboEthics R&D, whereas “Metaethics” attempts to decide the ontological status of the essential ideas in morals, like good and bad. Model: robot's choice with regards to wrong, and correct? “Applied ethics” is more useful and explicit. Applied morals begins with a specific arrangement of moral aides, and afterward applies them to explicit spaces to address explicit moral quandaries emerging in that. Utilitarianism is a moral philosophy that stresses the repercussions of one's actions. It tries to minimize the suffering and maximize the happiness of one's i.e., cost beneficial action.

If we see the benefit side of it, as we see AI is doing great in the industry and it also improve the cost beneficiary of industries for example. Assembly line jobs in industries done by humans are now replaced by robots because they work continuously without any break and also with fewer mistakes. Robots save manufacturers money, increase business profits or decrease the price of manufactured products.

On the other side of it, intelligent machines have a disadvantage in each of the situations above. They threaten to eliminate jobs, deprive us of meaningful job, prevent us from comprehending the data we analyze, isolate the elderly from human interaction, and, eventually, endanger our lives, maybe driving us extinct. These negative consequences are severe and should be taken into account before these technologies are used.

Is it ethical to utilize robots and AI in this way in the long run? Or do the disadvantages outweigh the benefits? Can we choose to support particular applications of robots and AI while restricting others?

Thus, we have such disciplines as bioethics, business ethics, environmental ethics, engineering ethics, and many others. What potential unsafe results might come from the structure of these robots? What befalls significant moral ideas, for example, independence and security when robots are beginning to turn into an indispensable piece of our lives. Another moral methodology incorporates expectations. What effect may mechanical technology and computerized reasoning have on basic freedoms?

AI monitor human our activities through social media, satellites, online purchases If some activities are linked to human rights violations in ways that humans haven't observed before, Then AI could be able to provide superlative diagnostic or even predictive capabilities to human rights organizations. Apart from that robot might also become the human rights abuser if they are not properly programmed. Currently, no country is using lethal autonomous weapon system, many of them are using lethal drones and autonomous drones. But if we merge both of its attributes It may be destructive for humans. What is the best way to utilize the Artificial Intelligence and robots that it will not be destructive for humans?

"Normative ethics," or "moral theory," compares ways to define the concepts "obligatory," "forbidden," "permissible," and "supererogatory." Normative ethics investigates which actions we ought to, or ought not to perform, and why. "Consequentialist" views render judgments on actions depending on their outcomes, while "non-consequentialist" views consider the intent behind actions, and thus the inherent duties, rights, and responsibilities that may be

involved, independent of outcomes. Notable consequentialist sees incorporate pride, charitableness, and utilitarianism; the most popular non-consequentialist view is presumably Kant's hypothesis of moral conduct, the portion of which is that individuals ought to never be blessed to receive an end.

we can have ethically good social robots when they satisfy the following three essential requirements.

- 1) Robots just make admissible moves.
- 2) All-important activities that are compulsory for robots are performed by them, likely to ties and clashes among accessible activities.
- 3) All allowable (or required or prohibited) activities can be demonstrated by the robot (and now and again, related frameworks, e.g., oversight frameworks) to be admissible (or compulsory or illegal), and everything such evidence can be clarified in normal English.

There are several aspects of human-human connection that appear to be uniquely human in ways that robots may not be able to replicate: compassion, love, and sex. Several tech optimists have stated that humans will be interested in sex and companionship with robots and will be comfortable with the notion (Levy 2007). This seems extremely possible, given the diversity of human sexual tastes, including sex toys and sex dolls: The debate is whether such gadgets should be produced and promoted, and if there should be any restrictions in this sensitive field. It appears to have just entered the mainstream of "robot philosophy."

In human-robot contact, emotional deceit and emotional attachment are considered ethical difficulties. It's critical to consider these concerns, especially since little is known about the long-term impacts of interactions with social robots. Due to the rising potential of robots

becoming a part of our daily lives in the future, there is a growing awareness of and interest in ethical implications for the creation of social robots. While interacting with their users, socially helpful robots can give psychosocial, physical, and/or cognitive support. One issue related to the human-robot interaction and social robotics relates to the lack of a common definition for a social robot-like Dautenhahn and Billard stated that a social robot is an embodied agent that is part of a society of robots and/or humans. In the literature, some ethical issues of utilising robots for elderly individuals have been highlighted. Reduced human interaction, loss of control, loss of personal liberty, loss of privacy, issues of accountability, infantilization, emotional deceit, and emotional connection are all examples of potential consequences.

In the literature, emotional deceit and emotional attachment have been mentioned as ethical difficulties. This has never been explored in practice, which was one of the study's objectives. A longitudinal human-robot interaction research was conducted to see if these concerns are mirrored in practice. Acceptance of the robot, sense of social connection, and attachment to the robot were all examined over time. To examine emotional deception, the robot's behavior was modified. This study looked at how emotional deception and emotional attachment may affect robot acceptance and social interaction perception, since they will be markers for the future development of ethically safe socially assisting robots.

In addition, as friendly robots are likewise utilized with weak clients like more seasoned grown-ups experiencing dementia it is fundamental to have rules on what human-robot associations are morally protected and satisfactory. Interfacing with future socially steady robots ought to be ethically protected. Therefore, depending only on reviews to investigate moral issues is a significant starting point for recognizing designs, yet it is deficient for making more authoritative decisions regarding these worries. Observing more passionate association

measurements, checking individuals' conduct through video records and discourse designs, and investigating individuals' physiological responses to the robot's direct will all be important for future turn of events. When the boundaries for emotive robot conduct as far as passionate duplicity and enthusiastic connection have been laid out for instructional experiences, they might be applied to different situations including more private human-robot communications.

How can we utilize robots and artificial intelligence to promote justice and fairness? Humans have certain living standard in a society, robots can help to attain that standard. Robotic and AI industry will provide extra help to provide the greater assistance. Example: Robotics and artificial intelligence (AI) may be able to provide additional assistance to those who require it. Robotics and AI may violate justice and equity. The right to equality, the prohibition of discrimination, and the right to privacy may all be jeopardized using big data and AI.

Aim for the Common Good

The goal of virtue ethics is to foster excellent character. Bravery and tolerance are virtue. Bravery is given power to face the hardship for the sake of goodness. Tolerance gives us self-control to resist “too much of a good thing” love, generosity, fairness, patience, effort, honesty, integrity, kindness, respect, and wisdom. In the context of robotics and Artificial intelligence, there is unquestionable value in putting in the effort necessary to create those systems during the first place. We are thankful to engineers, Scientists and technologist who have worked so hard to give us such technological product that are very commonly used now a days and thankful for the upcoming technological products.

Every successful technology opens the gates for new successful technological. If most difficult work will do by robots, then what will happen? What happen if robots are start doing

mistakes? Without the assistance of machines, people would be out of practice in terms of understanding how to work and achieve their objectives. We'd become addicted to the improper personality qualities, lack of skills if we depend too much on the robots and artificial intelligence.

The fact is a solution gives birth to several other problems in general and the process goes on. We solve multiple problems every day and the world face new problems every day, this is life.