

Artificial Intelligence

Ethics

Take close note of the instructions:

1. The assignment needs to be finished on an A4 page.
2. The top of the sheet should have your name, section, and roll number inscribed on it.
3. The assignment date ought to be noted at the top left corner of the page.
4. All questions should be written in bold, and if available, you can highlight or underline important points using sketch pens.
5. The responses can be produced using ChatGPT.
6. The assignment must be turned in before **April 24, 2024**.

AI – Ethics

Overview:

- ❑ We are now moving to the era of artificial intelligence. These days, instead of using data or information, ***we develop solutions using the intelligence gained from the data***. Even the next Netflix movie or TV series that you should view can be suggested by these solutions.
- ❑ Since we are at the forefront of AI usage trends, ***it is important that we keep ethical considerations in mind when creating AI-based solutions***. Let's take a closer look at a few of the ethical issues.

Moral Issues: Self-Driving Cars

Scenario # 1

Let us imagine that we are in year 2030. Self-Driving cars which are just a concept in today's time are now on roads. People like us are buying them for ease and are using it for our daily transits. Of-course because of all the features which this car has, it is expensive. Now, let us assume, one day your father is going to office in his self-driving car. He is sitting in the back seat as the car is driving itself. Suddenly, a small boy comes in front of this car. The incident was so sudden that the car is only able to make either of the two choices:

1. Go straight and hit the boy who has come in front of the car and injure him severely.
2. Take a sharp right turn to save the boy smash the car into a metal pole thus damaging the car as well as injuring the person sitting in it.

With the help of this scenario, we need to understand that the developer of the car goes through all such dilemmas while developing the car's algorithm. Thus, here the morality of the developer gets transferred into the machine as what according to him/her is right would have a higher priority and hence would be the selection made by the machine.

If you were in the place of this developer and if there was no other alternative to the situation, which one of the two would you prioritize and why?

Moral Issues: Self-Driving Cars

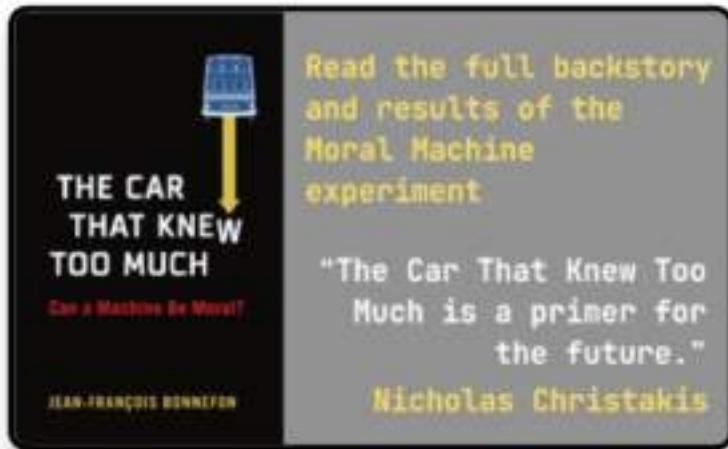
Scenario # 2

Let us now assume that the car has hit the boy who came in front of it. Considering this as an accident, who should be help responsible for it? Why?

1. The person who bought this car
2. The Manufacturing Company
3. The developer who developed the car's algorithm
4. The boy who came in front of the car and got severely injured

Here, the choices might differ from person to person and one much understand that nobody is wrong in this case. Every persona has a different perspective and hence he / she takes decisions according to the their moralities.

AI – Ethics



A platform for gathering a human perspective on moral decisions made by machine intelligence, such as self-driving cars.

<https://www.moralmachine.net>

Data Privacy

Every company whether small or big is mining data from as many sources as possible. More than 70% of the data collected till now has been collected in the last 3 years which shows how important data has become in recent times. It is not wrongly said that *Data is the new gold*. This makes us think:

1. Where do we collect data from?

2. Why do we need to collect data?



Data Privacy

*One of the major sources of data for many major companies is the device which all of us have in our hands all the time: **Smartphones**.* Smartphones in today's era provide us with a lot of facilities and features which have made our lives easier. Feeling hungry? Order food online. Want to shop but don't have time to go out? Go shopping online. From booking tickets to watching our favorite shows, everything is available in this one small box loaded with technology.

Another feature of smartphones nowadays is that they provide us with ***customized recommendations and notifications according to our choices***. Let us understand this with the help of some examples:



1. When you are talking to your friend on a mobile network or on an app like WhatsApp. You tell your friend that ***you wish to buy new shoes and are looking for suggestions from him/her***. You discuss about shoes and that is it. After some time, ***the online shopping websites start giving you notifications to buy shoes!*** They start recommending some of their products and urge you to buy some.
2. If you ***search on Google for a trip to Kerala or any other destination***, just after the search, ***all the apps on your phone which support advertisements, will start sending messages about packages that you can buy for the trip.***
3. ***Even when you are not using your phone and talking to a person face-to-face about a book you've read recently while the phone is kept in a locked mode nearby, the phone will end up giving notifications about similar books*** or messages about the same book once you operate it.

Data Privacy

In all such examples, how does the smartphone get to know about the ***discussions and thoughts that you have***? Remember whenever you download an app and install it, ***it asks you for several permissions to access your phone's data in different ways. If you do not allow the app these permissions, you normally cannot access it.*** And to access the app and make use of it, we sometimes don't even give it a thought and allow the app to get all the permissions that it wants. Hence every now and then, the app has the permission to access various sensors which are there in your smartphone and gather data about you and your surroundings. We forget that the smartphone which we use is a box full of sensors which are powered all the time while the phone is switched on.

This leads us to a crucial questions:

Are we okay with sharing our data with the external world?

[illegible]

Data Privacy



Why do these apps collect data?

We need to understand that the data which is collected by various applications is ethical as the smartphone users agree to it (by clicking on allow when it asks for permission and by agreeing to all the terms and conditions). But at the same time if one does not want to share his/her data with anyone, he/she can opt for alternative applications which are of similar usage and keep your data private. For example, an alternative to WhatsApp is the Telegram app which does not collect any data from us. But since WhatsApp is more popular and used by the crowd, people go for it without thinking twice.

AI Bias

Another aspect to AI Ethics is bias. Everyone has a bias of their own no matter how much one tries to be unbiased, we in some way or the other have our own biases even towards smaller things. Biases are not negative all the time. Sometimes, it is required to have a bias to control a situation and keep things working.

When we talk about a machine, we know that it is artificial and cannot think on its own. It can have intelligence, but we cannot expect a machine to have any biases of its own. Any bias can transfer from the developer to the machine while the algorithm is being developed. Let us look at some of the examples:

1. Majorly, all the virtual assistants have a female voice. It is only now that some companies have understood this bias and have started giving options for male voices but since the virtual assistants came into practice, female voices are always preferred for them over any other voice. ***Can you think of some reasons for this?***



AI Bias

2. If you search on Google for **salons**, the first few searches are mostly for female salons. This is based on the assumption that if a person is searching for a salon, in all probability it would be a female.

Do you think this is a bias? If yes, then is it a Negative bias or Positive one?



AI Access

Since Artificial Intelligence is still a budding technology, not everyone has the opportunity to access it. The people who can afford AI enabled devices make the most of it while others who cannot are left behind. Because of this, a gap has emerged between these two classes of people and it gets widened with the rapid advancement of technology. Let us understand this with the help of some examples:




AI Creates unemployment

AI is making people's lives easier. Most of the things nowadays are done in just a few clicks. In no time AI will manage to be able to do all the laborious tasks which we humans have been doing since long. Maybe in the coming years, AI enabled machines will replace all the people who work as labourers. This may start an era of mass unemployment where people having little or no skills may be left without jobs and ***others who keep up with their skills according to what is required, will flourish.***

This brings us to a crossroads. On one hand where AI is advancing and improving the lives of people by working for them and doing some of their tasks, the other hand points towards the lives of people who are dependent on laborious jobs and are not skilled to do anything else.

Should AI replace laborious jobs? Is there an alternative for major unemployment?



Should AI not replace laborious jobs? Will the lives of people improve if they keep on being unskilled?

Here, we need to understand that to overcome such an issue, one needs to be open to changes. As technology is advancing with time, humans need to make sure that they are a step ahead and understand this technology with its pros and cons.

AI for ~~kids~~ School Students

Consider this: A young boy in class 3 has got some Maths homework to finish. He is sitting at a table which has the Google chat bot - Alexa on it, and he is struggling with his homework. Soon, he starts asking Alexa to answer all his questions. Alexa replies with answers and the boy simply writes them down in his notebook.

While this scenario seems funny, it still has some concerns related to it. ***On one hand where it is good that the boy knows how to use technology effectively, on the other hand he uses it to complete his homework without really learning anything since he is not applying his brain to solve the Math problems.*** So, while he is smart, he might not be getting educated properly.

Is it ethical to let the boy use technology to help in this manner?

