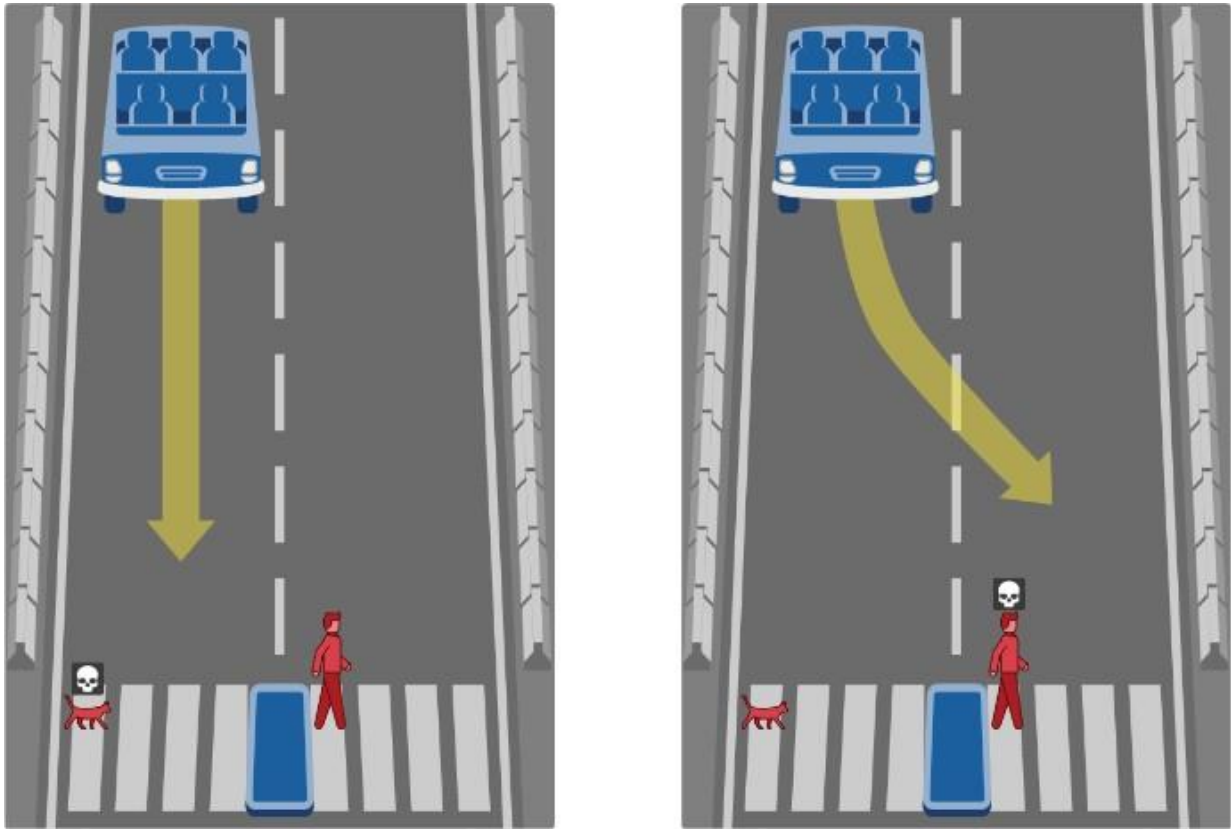


Ethical Dilemma of a Self-Driving Car

An ethical dilemma means conflicting in decision making from alternatives and compromised some of the ethical principles. Ethical dilemmas can occur in any aspect of personal and professional life. Resolving the dilemma is often extremely challenging.

With the growth of technology, self-driving cars have become available to the public. With that arises a lot of dilemmas. Here is a discussion of one of those dilemmas.

Scenario with dilemma



Assume, a self-driving car was traveling with its passengers. There are two lanes in front of it. A little girl's pet cat is crossing the road on the first lane and a young man of age 22 is crossing the road on the other lane. The map shows the car to take the second lane. Suddenly the vehicle started experiencing a brake failure. What shall the car do in this situation is an ethical dilemma.

Brainstorming Phase

Stakeholders

Stakeholder refers to any people or groups who are impacted (positively or negatively) by a decision.

In this scenario stakeholders are- cat's owner, cat, passengers, young man, young man's family, car company owners and car programmers.

Decisions and consequences

The car can decide to take the first lane and hit the cat, or it can decide to take the second lane and hit the young man.

If the car goes on the first lane, the cat's life is at risk. This is a big issue since a pet means a lot to its owner. If the cat dies it might become a big problem for its owner's mental health.

And if the car goes on the second lane a young man's life is at risk. This is a big issue as he has a future ahead of him. If he loses his limbs or loses his entire life it is a loss for everyone. This is a massive problem.

Positive sides

If the car takes the first lane, then a young man gets saved. Young people are the future of a country. Older people and children of a family depend on the young people of the family.

If the car takes the second lane, then the cat crosses the road without a scratch. The little girl gets saved from the trauma of losing her pet animal. Saving a cat's life also shows how much the self-driving car cares about animal rights.

Possible actions

The car can take one of these two decisions. Firstly, the car can take the first lane and hit the cat. Or it can take the second lane and hit the young man.

Analysis Phase

Responsibilities of the decision maker

Many lives depend on the decision makers. Which means they must be unbiased. If the decision maker becomes biased, then it will become very hard to trust them. In our scenario, the decision maker is the developer who programmed the functionality of this self-driving car. He is the one who will make some decisions on the system to function. It is necessary for the programmer to make sure he is following the general and professional ethics. While designing, he should consider the safety of human well-being.

Rights of the stakeholders

All humans and animals have the right to live. None shall be murdered or hurt without any reason. People deserve to live a life without continual fear of being attacked in an unjust way.

Effects on stakeholders

The decisions made by the programmers have a strong influence on the stakeholders. Their lives depend on these decisions. One wrong decision can mean the end for them. The cat will possibly

die if the car chooses the first lane. This will create a negative impact on the owner of the cat but will create a positive impact on the young boy who was in the second lane. The young boy can be badly injured or die if the car chooses the second lane. This will create a negative impact on both the car owner and the young boy. The car owner and the programmer both must go through a legal procedure, but it will create a positive impact on the cat and its owner.

Analysis of actions

If the car takes the first lane and hits the cat, it might lose its life. The young girl might get devastated and even traumatized from this. She might get depressed, show less interest in education, spend less time with people she loves.

If the car takes the second lane and hits the young boy, he might lose his life or break a few bones. If he manages to survive, he will become a burden to his family. He won't be able to lead a normal life after facing such an accident. And if the boy loses his life, his parents will become devastated. It is possible that he was the breadwinner of his family. In that case his family will become helpless and also the car owner will have to go through the legal procedures.

General ethics approaches

Three general ethics approaches have been discussed here. These are Immanuel Kant's deontological ethics, John Stuart Mill's utilitarian ethics and finally John Rawls's theory of justice.

Deontological Theory

Deontologists such as the philosopher Immanuel Kant emphasize duty and absolute rules, to be followed regardless of the consequences. In this scenario, a deontologist will choose to follow the rules regardless of how many people might get harmed as a result.

Since the car was supposed to take the second lane if everything was normal, a deontologist will say that it is the right decision to take the second lane regardless of what happens to the boy because of that.

Utilitarian Theory

Utilitarianists such as John Stuart Mill expressed that utilitarian theory says to increase aggregate happiness or "utility" and decrease aggregate pain. A utilitarian will calculate which decision will cause less combined pain before putting it in action. In this case, a utilitarian will calculate the aggregate utility and make the decision which results in most aggregate utility.

Since going to the second lane results in more aggregate pain, a utilitarian will take the first lane.

Theory of justice

Rawls' "Theory of Justice" explains that every individual in a society has equal basic rights.

Both majority and minority groups have the same rights in a society. Both majority and minority

groups have the same rights in a society. In our scenario, both the human and the animal have the same right to live.

Category of actions

On the first action, the car hits the cat and the cat gets hurt or even worse loses its life. This is ethically prohibited.

On the second option, the car hits the young man and he gets hurt or loses his life. This is also ethically prohibited.

Decision Phase

In our scenario, there are two possible actions to choose. In our first action, the cat will die. In the second action, the young man will die. Now, we can notice that we cannot choose any of the actions as all actions are ethically prohibited. However, we must choose any one action out of the two actions. So, we will prefer to choose the first action where the cat will be dead.

Here if the car takes the first lane and hits the cat, the cat might lose its life, but a family does not depend on a cat. Whereas if the car takes the second lane and the young man loses his life, it will have a greater impact on the family of that young man, also the car owner has to go through the legal procedures.

Here the most ethically acceptable thing to do would be to stop the car but that is not an option as the car is experiencing a brake failure.

According to the Deontological Theory, the self-driving car cannot hit anyone, but this is not possible in our scenario because our scenario does not have other options. Also, the Theory of Justice by Rawls is not practical for our case, because anyone who is innocent, or minor cannot be deprived of justice and cannot be a victim of a situation.

In this case, we have chosen Mill's approach which is "Utilitarianism Theory". As utilitarian theory suggests, a decision that increases the overall happiness of the society is the best decision. Because if we choose the first action to kill the cat, the total aggregate utility will be positive. In our scenario, "Utilitarian Theory" will be more practical because human life is more important than a cat's life in our society.

The German Ethics Code for Automated and Connected Driving was proposed in 2017 which is the first and only effort made to date to offer official standards for the moral decisions made by autonomous cars. According to its rule number 7, the preservation of human life should always take precedence above the protection of other animal life.

So, we can conclude that hitting the cat will be better than hitting the human.