Artificial Intelligence, simply defined is the imitation of the human intellect or human behaviour. The emergence of Artificial Intelligence in our day to day life has become more pronounced. The question that arises is, whether our Patent laws are adequate to incorporate AI in its patentability criteria. Also, another unanswered question is how to address the liability of harm or damage caused by the AI to human society. The important question to be answered is who should be held responsible for such damage.

For a patent to be registered the invention must be novel, non-obvious and it must have utility. For a patent to be novel, the invention must not be known or used and must not be printed or published in a journal. The most difficult part to be proved is the non-obviousness. For an invention to be non-obvious, it must have a distance from the prior art. There must be an inventive leap.[1]

Self-Driving Vehicles would be commercially available by 2025 and the recent statistics show that the development in the innovation is fast and a transport revolution is expected to come. Looking at the patent applications in this field, it gives a unique insight into the race to innovate in smart, connected and automated vehicles. The crash of the Tesla's driverless car and explosion of the SpaceX Falcon 9 rocket at its Cape Canaveral Launch pad are strong reminders that when artificial intelligence (AI) driven technology is advancing at a dizzying pace then regulators cannot lag behind.

All of us have experienced the benefits of AI in various forms like- email spam filtering, Facebook's auto recognition to tag your friends and family, web page translation, booking cabs, ordering food, paying bills, recharging phones, etc. Countries like, U.S. and others have recognised the problem and have started the formulation of new policy whereas laws in countries like India still lag behind where the ethical and regulatory implications of Artificial Intelligence has not yet been recognised.

The main concern is that the current patent laws are inadequate to protect AI system. For an example- current patent laws cannot be used to protect compilation of data, Artificial Intelligence training sets or a programmer's particular expression of source code. Further, looking at the incremental progress and machine learning process of the underlying algorithm, it is very difficult to describe the functions of AI as required for granting patent.[2] The learning of the machine in present days attempts to duplicate the human intelligence by interacting with the world and receiving the corrective inputs. It is almost like teaching a child right from wrong by scolding him or praising him. AI machines also learn in the similar binary corrections.

Another major concern regarding AI is the liability in case of harm or damage caused by it. In the Uber AV fatality case, during a real world testing of an autonomous car operated by Uber, Elaine Herzberg was struck and thereafter killed by the car. This was believed to be the first case recorded regarding pedestrian fatality involving an autonomous car with a human emergency driver behind the wheels. The accident took place at around 10pm, when the

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[1] https://smallbusiness.findlaw.com/intellectual-property/patent-eligibility-requirements.html
[2] https://techcrunch.com/2019/02/07/autonomous-cars-driving-reinvention-of-ip-protection/

In investigating accidents involving **autonomous vehicles** that issue does not come into question. Since the vehicle will be operated by a computer, not a human, accident reconstruction experts will focus only on the product itself, and the actions or inaction of the occupants of the vehicle will be irrelevant in determining the cause of the accident. This will entail accident reconstruction experts examining various technology malfunctions, such as the software and hardware that are used to control the self-driving car. This will require the accident reconstruction experts to have expertise beyond the fields of mechanical engineering and biomechanics, and will require additional expertise in the fields of computer science, data analytics and programming.

Before we can dive into technology issues, we have to identify whether the people are fundamentally at fault here for this incident. From what was known at the time, the individual crossed into the road without using a crosswalk and was walking a bike at the time, which might have confused the internal system responsible for identifying potential hazards. While the car and backup driver should have been able to see the pedestrian, is it possible that the pedestrian might have liability in this case? Perhaps, but reasonable human drivers would have been paying reasonable attention to the road and most likely noticed the pedestrian, at least swerving or braking to avoid a last minute collision.

Likewise, perhaps the human backup driver is at fault here. After all, the car was not operating without any humans at all in the vehicle. In the United States current law requires a person to be in a moving car where they can control the wheel. In this situation, the person was there but autonomous mode was engaged on the car. The driver was here, supposedly ready to take over control at any moment given problems in the autonomous system. This is not fully autonomous Level 5 operation, but rather limited autonomy that still relies on the human as backup. In this case, the human failed to provide that backup.

So is the human driver the liable party here? Perhaps, but is it really reasonable to assume that a human can go from being completely unaware of their surroundings, counting on the machine to do all the work, and then be asked to step in at a critical moment to handle a life or death issue with very little notice? It's hard to see how the human brain can instantly go from being unaware to acutely aware and able to handle a problem in such a short amount of time. Perhaps the entire assumption and expectation of the human backup driver is unreasonable.

The question of whether legal personhood can be conferred on an AI boils down to whether it can be made the subject of legal rights and duties. A possible middle ground may be granting AI a bundle of rights selected from those currently ascribed to legal persons. However, concrete steps in this regard are yet to be seen.

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[3] https://www.forbes.com/sites/cognitiveworld/2019/09/26/what-happens-with-self-driving-cars-kill-people/#234661c0405c

Another issue that arises is attributing liability to an AI. The general rule has been that since an AI cannot qualify as a legal person, it cannot be held liable in its own capacity. The biggest roadblock to reconsider this rule is the conundrum as to how to penalise an AI for its wrongdoing, which has not been dealt with as of today.