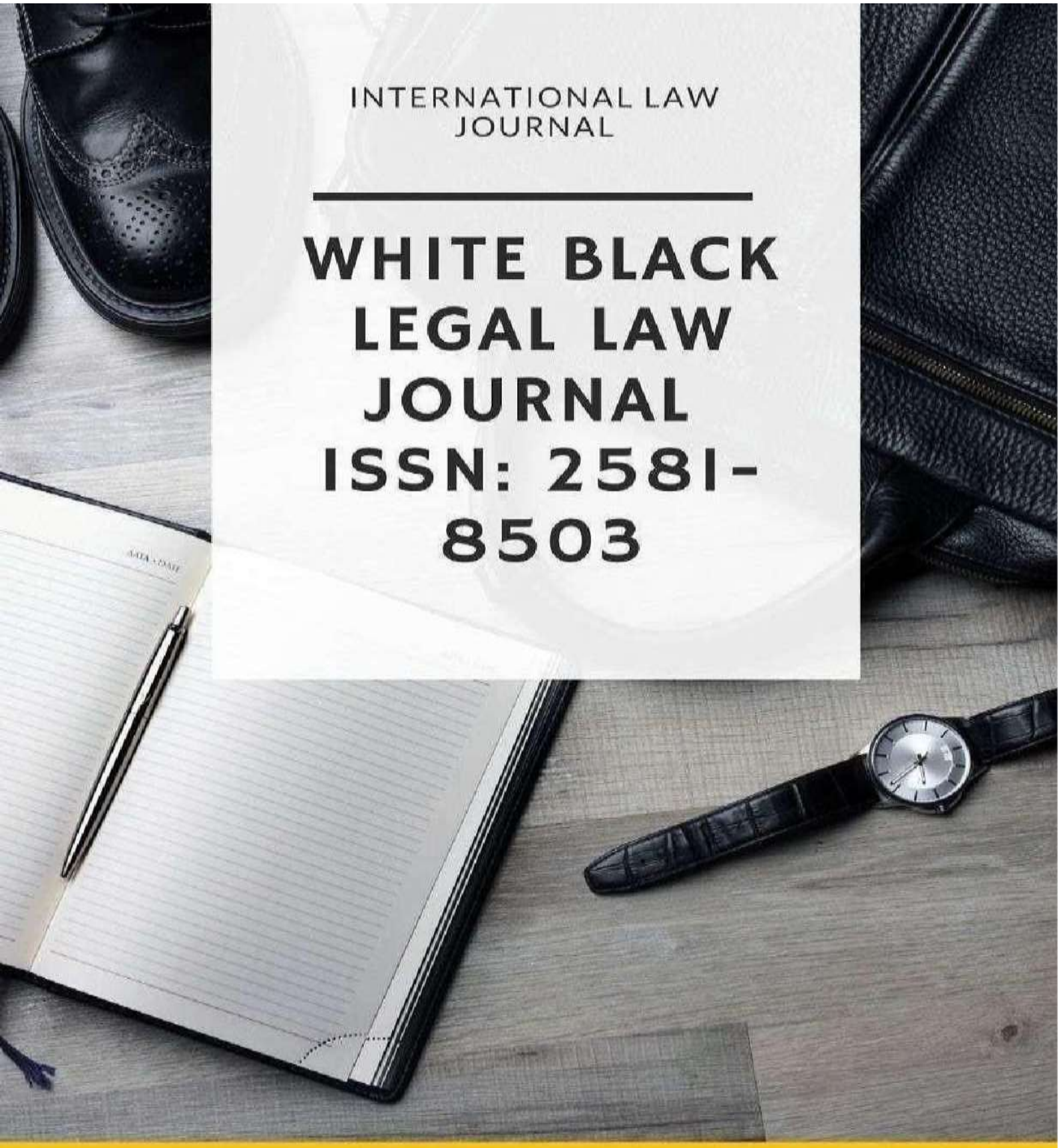

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With this thought, we hereby present to you

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ARTIFICIAL INTELLIGENCE IN AUTOMATED VEHICLES: LEGAL ISSUES & CHALLENGES

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ABSTRACT

Artificial Intelligence (AI) has transformed the modern world. AI increases the technology and work efficiency. Automated vehicles are designed to operate manually with the help of AI/software without direct human control and use advanced systems of sensors which help us to reduce accidents, machine learning, and decision-making algorithms to ensure the mobility and safety of the humans. The purpose of this study is to examine and discuss the opportunities and the challenges created by the technology (AI). This research paper reviews both international and national perspectives on this subject. Global studies mostly stress on safety testing, product liability, and ethical decision-making, while Indian studies focus on traffic management, regulatory gaps, and the need for infrastructure readiness. This paper also discussed some legal challenges and ethical issues that include liability in accidents, product defects hidden in algorithms, accountability between humans and machines, and concerns over data privacy and cybersecurity. Ethical issues arise when machines start making life-and-death choices, forcing society to question how values should be programmed into technology. Automated vehicles could potentially pose a threat to human safety due to their vulnerability to hacking. These findings need urgent legal frameworks at the national level as well as at the international level which ensure strong cybersecurity measures, and the promotion of public awareness to ensure the safety of the humans and to protect & promote the development of AI.

Keywords: Artificial intelligence (AI), self-driving cars, automated vehicles, transportation law, and human safety.

INTRODUCTION

Artificial Intelligence (AI) is an idea that has grown very fast in the last few years. In simple words, it basically means "teaching a machine to copy the way humans think and act"[1]. A computer or system trained with AI can look at data, learn from it, and make decisions. When this idea is used in transport, it changes the way people move from one place to another. The best example is the creation of automated or self-driving cars and vehicles. These types of cars or vehicles can notice what is around them, follow signals, and move without human hands on the wheel. The main hope behind them is to make travel safe, reduce accidents that happen because of human mistakes, and bring more comfort in daily life. The need for automated vehicles is becoming important in this time because the roads are becoming busier year by year, and accidents are also increasing[2]. Many of the accidents happen because of careless/drunk driving and tiredness of the drivers. The accidents which are caused by human beings are decreased; even a self-driving car drives safely because it does not get angry, sleepy, or distracted. It strictly follows the rules which are prescribed by the manufacturer without emotions. Even such vehicles can also help people who cannot drive on their own, like senior citizens or persons with disabilities. It can be a big benefit from these vehicles, like how they may reduce traffic jams and help in saving fuel. Some of the companies, like Tesla and Google, have already started testing these cars on real roads and among the public, showing how they can work in daily travels. Even many countries recognised and allowed travel on the roads,[3] like; Waymo (by Google/Alphabet) runs autonomous taxis in parts of the USA (Arizona, San Francisco, and Los Angeles); these cars operate without a human driver in some areas. Like Cruise (by General Motors), which tested driverless taxis in San Francisco, though they recently paused some operations due to safety issues, it may restart soon. This study is not just about how the cars function. It also looks at how they may affect people, law, and society as a whole. Because its wide area includes the good effects, such as safety, comfort, and efficiency, as well as the difficult side, such as legal issues, privacy, and cyber risks. It also provides a better understanding about the present laws, which were made for human drivers, and how they can deal with machines making driving choices. Also discuss the other countries' provisions which are being taken and what can be learnt from them. This makes the study useful not only

[1] Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (4th edn, Pearson, New Delhi 2021) p. 3.
[2] Ministry of Road Transport and Highways, *Road Accidents in India 2023* (Government of India, New Delhi, 2024) p. 15.
[3] OECD/International Transport Forum, *Regulating Automated Driving: Strategic Directions for Governments* (OECD Publishing, Paris 2015) p. 9.

for engineers but also for lawmakers, lawyers, and common people who may use these cars in the future. To answer these issues, the research will ask some clear questions. For example, if a self-driving car meets with an accident, who will be responsible—the owner, the car company, or the software maker? How should traffic laws be framed or changed to deal with this kind of vehicle? What safety standards must be followed before these cars are allowed everywhere? And finally, how can people trust machines with something as serious as human life? To deal with these questions, the method will be based on reading laws, books, articles, and court decisions. It will also include comparing how different countries handle these problems. This study will provide you a fair picture of both the benefits and the challenges of AI in automated vehicles as well as the need for AI in automated vehicles in our society.

ARTIFICIAL INTELLIGENCE AND AUTOMATED VEHICLES

Artificial Intelligence basically means the ability of machines and computers to think, learn, and make decisions like humans. Now, AI is becoming smarter and more capable, changing how we live, work, and interact with technology. AI is trained by the humans to act like the humans or more than humans; it works by using data, identifies patterns, and applies logical reasoning to perform tasks. It helps people to work more faster, make better decisions, and complete tasks more efficiently, it helps to reduce the time and cost of the work. Example- For our car, we need a driver to drive such car, now automated cars are resolving this issue not need to hire the driver, but also shows some challenges that may increase more unemployment.

Automated vehicles are vehicles that run without a human spot; these are trained by humans and also called self-driving cars or automated cars. Engineers trained automated vehicles with the use of Artificial Intelligence (AI)/technology, sensors, cameras, and software to detect roads, traffic signals, obstacles, etc. By combining AI with automated vehicles, these vehicles can now make decisions while driving, such as stopping at red lights, avoiding accidents, and choosing the best route. Engineers are training the automated vehicles to make travel safer, reduce human errors, save time, and improve traffic flow. They can also make transportation more convenient and easier for people who cannot drive by themselves.

Artificial Intelligence (AI) and automated vehicles are transforming the way of travel. Artificial Intelligence (AI) acts as the brain, while sensors and software act as the eyes and decision-making system of the automated cars. Automated vehicles may reduce the traffic and accidents

which are increasing day by day due to human mistakes/errors, while most of the accidents are happening due to the drinking or tiredness of the human. To improve the transportation, it may be a good step, because it is showing major positive factors as compared to the humans driving. Not on the positive side, this is also coming up with some challenges, like the legal/ethical issues, accountability, etc. Before discussing these, first look upon the history or evolution part of the automated vehicles.

The background and evolution of automated vehicles are important to understand.

2.1 Ancient and Early Concepts of Autonomous Transport: A long time ago people always wondered how machines could move by themselves. Even in old stories, like Greek myths, they talked about carts or helpers made by gods which can work alone. In China, some inventors made small machines like water clocks or tiny moving statues. They were not cars, but it shows people dream about machines that can work without humans. Later people start thinking if the machine can do more than move towards the machines[4]. Some built toys and clocks which can move without anyone's help. They were simple but showed the machine can work alone. People imagine maybe in the future cars can drive without humans too.

2.2 The Industrial Revolution and Mechanization of Transport: When the Industrial Revolution started, travel changed a lot. Steam engines make trains and ships which move fast. Early cars appear too. People still drive them, but machines carry people and goods farther and faster than horses. Roads were busy now; people were seeing machines can make life easier. We can consider that this was the first step which shows that the car can move automatically one day. With new machines, some new problems came. Accidents happen, and the government makes relevant rules to keep people safe. In Britain, Locomotive Acts tell how fast a car can go and where it can move. These were simple rules, but these were very important to deal with these issues. These laws also help in this present time, because these laws firstly recognised the vehicles or the machines on the roads; now they are helping to frame legal provisions for self-driving cars.

2.3 The 20th Century and the Rise of Intelligent Machines: In the 1900s, scientists make robots and computers. They can follow instructions and do small work alone. Can’t drive cars yet, but shows machines can act without human interference. Many factories started to use

[4] Rodney Brooks, *Flesh and Machines: How Robots Will Change Us* (Vintage Books, New York 2003) p. 18.

them to complete their tasks automatically. By the 1950s and 1960s, people think machines can learn and decide. In this time "Traffic lights change automatically", a small guidance system was tested. It shows that one day cars may be able to move automatically.

2.4 In the 20th Century: Early Automated Vehicles Research (1970s to 1990s): During the time period of the 1970s and 1980s, research on cars started including features that made them easier to drive. Like anti-lock brakes, cruise control makes driving safer and promotes human safety[5]. It can react faster than humans sometimes. The driver still steers, but the car cannot help in avoiding accidents. At the same time, universities and the government test early self-driving cars. Mercedes-Benz and the US military try sensors, cameras and computers. The car can see the road and obstacles. Although these tests progressed slowly, they demonstrate that cars can operate with reduced human assistance.

2.5 In the 21st Century: Emergence in Modern Automated Vehicles: Since 2000, technology started to grow faster. Vehicles or cars see obstacles, read signs, and make decisions with the help of or using AI. Machine learning helps cars or vehicles to learn from their own experiences. GPS and maps help navigate streets. Cars become safer and smarter. Now people started imagining a day when humans will not need to drive cars; the cars will run automatically. The DARPA challenge is the big step towards making this idea into a reality. Now cars drive in deserts and cities; even without humans, it helps. Tesla, Waymo, and Uber test the cars in real streets; it shows that self-driving cars are not just an idea – now they are real. Now self-driving cars are in many countries. Taxis, delivery trucks, and other vehicles run with less human help. Governments make rules to save people. Still a trust issue.

ISSUES & CHALLENGES IN AUTOMATED VEHICLES

The use of smart systems in vehicles to make them "automated vehicles" is a big step forward for the transportation industry. The self-driving cars promise safety, efficiency, and comfort but do not get complete success and also bring up a lot of legal and ethical issues. The legal issue is related to the current laws, which were made for the humans, not the automated vehicles. But now we have come to the automated vehicles; to deal with it, we need adequate laws. Ethical issues related to the self-driving cars bring up new questions like, 'Who is to blame if there is an accident?' How can we keep the data that cars collect safe? What rules

[5] John D. Graham, *Auto Safety: Assessing America's Performance* (Greenwood Press, New York 1989) p. 64.

should governments establish to ensure public safety and protect human dignity? And what about moral questions? Can we trust a machine to make choices that could mean life or death? These are some main issues which need to be resolved as early as possible to protect the autonomy of the individuals, human dignity and freedom of the individuals. It is very important to frame such adequate laws, which may protect the growth and development of AI, as well as to maintain the balance between the humans and machines.

3.1 Liability and Negligence

To set the liability on automated vehicles is one of the biggest legal problems, because the automated vehicles are not "recognized as legal persons under our current laws". The current laws say if the driver caused the accident, he will be responsible for such an act. We need to determine who is liable for the software that controls the cars. Is the car's maker to be held responsible? Should the programmers who created the algorithm be held responsible? Should we hold the person inside the vehicle responsible?

3.1.1 Product Liability in Automated Vehicles: According to the principle of product liability, if a product has a flaw and hurts someone, the company that made it is liable[6]. Should an accident occur due to malfunctioning sensors, cameras, or control systems, the car manufacturer bears responsibility. For example, if a car's brakes fail due to a design flaw, the manufacturer must pay for the damage but sometimes, an accident occurs not due to a car's obvious issue, but due to an unexpected action. In these cases, courts will struggle to determine if the car company is liable or if the accident was unavoidable. This dilemma makes it necessary to come up with new legal definitions of product liability for smart driving systems.

3.1.2 Human vs. Machine Accountability: Another important question arises: who will be responsible for the act of automated vehicles, and who will balance between human passengers and machines? Even some semi-autonomous cars still let drivers in the cars take over when they need to; in that situation, should the person be held responsible if the semi-automated car didn't take help or the person himself did not do anything? If the car was fully self-driving and the passenger had no control, it would be unfair to blame them. This brings up the issue of shared responsibility. Liability could be split between the person (if negligence is proven), the

[6] David G. Owen, *Products Liability Law* (Aspen Publishers, New York 2020) p. 45; W. Page Keeton et al, *Prosser and Keeton on the Law of Torts* (5th edn, West Publishing Co., St. Paul 1984) p. 700.

manufacturer, and the software developer. These kinds of cases will continue to cause problems until there are clear laws.

3.2 Data Privacy and Cybersecurity

To work, self-driving cars need to gather a lot of information. They keep an eye on the weather, the speed, the location, the road signs, and even on the humans – how the passengers act. This can be a big issue because the whole data can be hacked, which may cause the unrepayable losses.

3.2.1 Data Collection by Self-Driving Vehicles: Only with the help of sensors, GPS, and cameras do the automatic vehicles work. This software keeps track of data all the time to make sure everything runs smoothly. The car might be hacked, and they could easily get information[7] about location, how fast you drive, where you stop, and how you travel every day. This information can help make traffic systems better, but it can also be used in the wrong way. Companies might sell this information to advertisers, which could reveal private information about people. Think about a car that keeps track of all the places you go, like hospitals, places of worship, or political meetings. If this information comes out, it could hurt people's freedom. Therefore, we need strong privacy rules to prevent companies from misusing and storing this data.

3.2.2 Risks of Hacking and Cyber Threats: One of the major risk is Hacking. Hackers can take control of your car, because driverless technology relies on the internet and software. This could be very dangerous and can cause accidents, theft, or even terrorist attacks[8]. Hackers can cause big traffic problems if they take over a group of cars, for instance. Companies need to spend money on strong cybersecurity systems to stop this from happening. Laws should also require car companies to regularly update their software and report any cyber incidents. The governments should act and need to set up policies and groups to make sure that businesses are following these safety rules, which may protect the humans and their dignity.

[7] Aarishti Singh, "Privacy and Data Protection in the Age of Autonomous Vehicles" (2024) 6 *International Journal for Multidisciplinary Research* 1, 3;
[8] Dr. S.S. Jadhav & Jai Prakash, "The Security Implications of Self-Driving Cars in India" (2023) 9 *Innovative Research Thoughts* 361, 365

3.3 Regulatory Frameworks

A legal framework is very necessary to guide the safe use of self-driving technology, but still in India we do not have laws which may recognise AI or technology as a person to deal with these types of matters. Even different countries are making their own rules, but there is still no universal standard[9].

3.3.1 International Regulations (EU, USA, Japan): European Union (EU): The EU is working on a strong set of laws; for example, the EU recently passed an AI Act in 2024. The EU is the only country that takes that big step towards the development of AI and for the safety & protection of humans. It wants to make sure that self-driving cars meet strict safety standards. The EU's GDPR laws also protect people's privacy, which means that car companies must do the same. United States (USA): Each state in the USA can make its own rules. For instance, California has strict rules for testing driverless cars, but other states are more flexible. The respective government also supports new ideas and also makes a balance between human lives and future growth. Japan also supports self-driving cars and has already allowed some levels of automation on public roads. Japan is also careful about safety, though, and requires carmakers to meet certain technical standards before they can sell their cars. That shows that countries want to develop AI and a new idea of AI, but they also have some major issues, like the rights & balance between safety, privacy, and responsibility.

3.3.2 Indian Legal Framework and Draft Guidelines: In India we do not have such laws; the situation is very different. In India we have the Motor Vehicles Act of 1988, which was written for people who drive cars; that is not suitable for automated cars. The Indian government, on the other hand, is interested in rules that will come out in the future. There have been suggestions for draft guidelines that focus on defining responsibility between manufacturers and users, making sure data is safe, testing vehicles on Indian roads, and encouraging research while keeping public safety as the top priority. The driverless cars can't be fully used on Indian roads until there are clear laws about them. This is because Indian roads are often difficult to predict, and without strict rules, accidents and fights could happen more often.

[9] Smriti Rai, Deepak Kumar Chauhan & Dharmendra Kumar Kumawat, "Wheels of Justice: Analysing the Legal Status of Autonomous Vehicles in Contemporary Legal Realm" (2023) 4 *ShodhKosh: Journal of Visual and Performing Arts* 843, 852

3.4 Ethical Considerations

Driverless cars also bring up moral questions, in addition to legal and technical ones. Let's take an example: if an automated vehicle has to choose between two individuals, like one who is 20 years old and another who is 80 years old, whom will AI first secure? These types of moral issues shall be dealt with appropriately, because AI does not have emotions, like the humans who are having minds and emotions.

3.4.1 Machine Decision-Making in Accidents: Think about this: a self-driving car is about to hit a child who is crossing the street. To save the child, the only thing to do is to hit an old person who is walking. What should the system choose[10]? To save the child's life, you may have to give up another life. AI or normal machines both follow rules that have been programmed into them, while people act on instinct & immediately. These turns make decisions into a moral issue. Lawmakers, ethicists, and businesses need to agree on the rules that automation should follow. Should it reduce overall harm? Should it put the people in the car first? Or should it value all lives equally? There is no one answer, and different cultures may prefer different ways to do things.

3.4.2 Ethical Dilemmas in Programming Vehicle Behaviour: Teaching a machine "how to be ethical" is very difficult because machines lack emotions and feelings; understanding emotions and behaviour requires the presence of feelings. If the system is set up to always save passengers, it could put pedestrians in danger. Customers may not trust the car if it is set up to save pedestrians. Also, who will be responsible if people don't like the decision? The manufacturers, programmers, or regulators? These moral problems show that technology can't fix everything on its own. To resolve this issue, we need proper policies and rules which may protect the humans from automated vehicles as well as the growth and development of automated vehicles in the field of AI.

EXISTING LEGAL MECHANISMS

4.1 National Legal Framework

We currently lack proper and adequate laws to address automated vehicles; however, we are working on developing new policies and regulations related to AI. The Ministry of Road Transport & Highways (MoRTH) has proposed amendments to the Central Motor Vehicles

[10] NITI Aayog, *Responsible AI for All: 2021 Strategy* (Government of India, New Delhi 2021) p. 30.

Rules, 1989, making Advanced Driver Assistance Systems (ADAS) mandatory for heavy vehicles, alongside other draft rules on safety features like Automatic Emergency Braking, Electronic Stability Control, and Event Data Recorders. NITI Aayog's National Strategy for Artificial Intelligence and smart mobility roadmaps (2018–2025) provide policy guidance for AI adoption, infrastructure planning, and pilot projects, collectively supporting safe deployment and legal recognition of automated mobility technologies in India. In India, much of the work involves passing and framing adequate laws that may recognize AI as having personhood, which would determine the accountability and responsibility for AI's actions. However, discussing automated vehicles will take more time because we first need to recognize AI, a process that is still pending. These are some steps which were recently taken by India towards the AI.

4.1.1 The Motor Vehicles (Amendment) Rules, 2025: A draft for amending the Motor Vehicle Rule 1989 was made by the Ministry of Road Transport & Highways on 20 March 2025, under which Advanced Driver Assistance Systems (ADAS), including lane-keeping, driver drowsiness detection, automatic braking, and electronic stability systems for heavy passenger and goods vehicles (categories M2/M3, N2/N3), have been proposed to be mandatory. This is the first draft, or first step, which is addressing semi-automated and assisted driving technologies, marking a key step toward legal recognition of automated vehicle features[11].

4.1.2 The MoRTH Draft Notifications & Policy Moves on ADAS / Vehicle Safety (2024–2025): The drafts were proposed with the intent to enhance safety, monitoring, and accountability in the use of automated and connected vehicle technologies. This includes multiple drafts, rules and press releases issued between 2024 & 2025. Drafts propose making Automatic Emergency Braking (AEB), Electronic Stability Control (ESC), Event Data Recorders, and vehicle tracking systems mandatory for vehicles in a phased manner. This draft provides a legal framework and pathway for regulating semi-automated and connected vehicles on Indian roads, supporting safer deployment of emerging automotive technologies[12].

[11] Ministry of Road Transport and Highways, *Draft Central Motor Vehicles (Amendment) Rules, 2025 – G.S.R. 184(E)*, Notification, Mar. 20, 2025
[12] Ministry of Road Transport and Highways, *Draft Notifications and Policy Initiatives on ADAS/Vehicle Safety (2024–2025*

4.2 International Legal Framework

As compared to the national level, we have a proper legal framework which may deal with AI/automated vehicles. The international legal framework is shaped by conventions like UNECE regulations and global policy guidance, establishing standards for safety, cybersecurity, software management, and operational performance. Many counties are strongly working on AI and automated vehicles, as the technology is increasing day by day. Let's discuss in detail the international legal frameworks which clear the need and which provide us with the suggestion & direction for a national-level legal framework.

4.2.1 The Vienna Convention Amendment on Road Traffic 2016: This amendment entered into force on 23 March 2016. It was originally adopted on 8 November 1968 under the United Nations; the amendment clarifies that vehicle control may be transferred to the vehicle, and it allows automated vehicles driving on public roads. This shifts the control of vehicles from the humans to vehicle itself. It provides an international legal basis for automated vehicles while ensuring compliance with traffic rules. Now that technology has been increased, that vehicles can control themselves it may reflects that human interference is reduced, this convention also helps other countries align their national traffic laws with emerging self-driving and automated vehicle technologies[13].

4.2.2 UN Regulation No. 155—Cyber Security & Cyber Security Management System: It was adopted under the 1958 UNECE Agreement (WP.29) and entered into force in February 2021. Under this we are provided with certain requirements which the manufacturers have to fulfil and implement a "Cyber Security Management System" (CSMS) to protect vehicles against "cyberattacks throughout their lifecycle", and it also covers risk assessment, monitoring, response, and updates, ensuring that connected and automated vehicles maintain cybersecurity standards. This is the first binding international regulation specifically addressing "cybersecurity for vehicles", providing a global framework for manufacturers and regulators to safeguard automated and connected vehicle technologies[14]. This regulation makes clear that the automated vehicles shall be protected from the cyberattacks; otherwise, it may cause losses which may not be handled.

[13] United Nations, *Convention on Road Traffic (Vienna, 8 November 1968), as amended 23 March 2016*
[14] United Nations Economic Commission for Europe (UNECE), *UN Regulation No. 155 — Cyber Security and Cyber Security Management System*, 1958 Agreement (WP.29), (Feb. 2021)

4.2.3 UN Regulation No. 156 — Software Update & Software Update Management System: It was adopted under the 1958 UNECE Agreement (WP.29) and entered into force in early 2021. Under this we are provided with certain requirements for manufacturers to establish a "Software Update Management System" (SUMS) to ensure vehicles can safely receive software updates, including over-the-air updates; it also covers planning, testing, documentation, and secure implementation of software changes. This regulation makes clear that the automated vehicles shall be protected from the cyberattacks while ensuring that software modifications shall be implemented; otherwise, it may cause losses which may not be handled because it is crucial to protect the safety or performance of automated vehicles[15].

4.2.4 UN Regulation No. 157, Automated Lane Keeping Systems (ALKS): It was adopted by UNECE (WP.29) in March 2021. It provides with the standards for "Automated Lane Keeping Systems" which allows vehicles to control steering, acceleration, and braking on highways up to defined speeds. This regulation also provides the first international legal framework specifically for Level 3 automated driving, ensuring safety, performance, and regulatory approval for automated lane-keeping technology. The 01 series of amendments, which expanded the system's scope to include lane changes and higher speeds, entered into force on 4 January 2023, with practical application starting from September 2023 for certain provisions. With reference to this, the Indian government shall come up with similar or adequate laws which may recognize and allow the automated vehicles with adequate laws/policies[16].

4.2.5 UN Regulation No. 171- Driver Control Assistance Systems (DCAS): It was adopted by UNECE WP 29 in March 2024 and entered into force in September 2024; it provides us with a type-approval framework for "Driver Control Assistance Systems", which covers SAE Level 2 automated driving systems. This regulation creates a legal and technical basis for approving Level 2 automated driving technologies, promoting consistent safety and suggesting the requirements across countries that implement UNECE vehicle regulations[17]. The purpose for this regulation is to set some standards for system performance, safety, and monitoring,

[15] United Nations Economic Commission for Europe (UNECE), *UN Regulation No. 156 — Software Update and Software Update Management System*, 1958 Agreement (WP.29), (2021)
[16] United Nations Economic Commission for Europe (UNECE), *UN Regulation No. 157 — Automated Lane Keeping Systems (ALKS)*, (Mar. 2021)
[17] United Nations Economic Commission for Europe (UNECE), *UN Regulation No. 171 — Driver Control Assistance Systems (DCAS)*, (Mar. 2024)

ensuring that vehicles can assist drivers with steering, acceleration, and braking while maintaining safe control.

LEGAL PRECEDENTS

If we discuss the latest or landmark "legal precedents" to deal with the same in India, we do not have laws which may recognize AI or automated vehicles; because of that, our Indian courts are unable to face such matters in the respective courts. Let's discuss some precedents from the foreign courts; foreign countries are having appropriate laws under which both AI and automation are recognized. In India we do not have cases related to AI because we do not recognize AI as a legal person or entity, not yet held liable or accountable for their acts, but in foreign countries the governments have made proper laws and courts which deal accordingly. Let's discuss some case laws which may provide us an idea related to the issues and challenges with the automated vehicles. These key legal precedents highlight the importance of accountability and compliance in automated and connected vehicle technologies.

5.1 Court Name: United States District Court for the Northern District of California (San Francisco Division), Parties Name: United States v. Waymo LLC, Case No.: 3:17-cv-00939-2018

Issues before the Court: The main issue before the court was whether Uber had gained access to Waymo's confidential or secret information through its former employee. The court had to decide whether Uber had wrongfully taken trade secrets from Waymo and whether this provided Uber an unfair advantage in the development of self-driving cars. Another issue was the protection of intellectual property and whether corporate secrets should be safeguarded more strictly in the competitive field of automated vehicle technology.

Decision of the Court: The court took cognizance, and directed both the parties to resolve the dispute through mutual settlement. Following the direction of the court, the parties agreed to a settlement. Under this settlement, Uber accepted to pay Waymo a large amount as compensation. Not only this, but Uber also gave assurance that it would not use Waymo's stolen technology in its self-driving projects. This decision shows the importance of intellectual property rights, fair competition, and corporate accountability. This decision becomes the good message to other companies, that if the companies stealing or misusing trade secrets, it could lead to serious financial and legal consequences in the field of Artificial Intelligence (AI) and

Automated Vehicles[18].

5.2 Court: European Court of Justice (ECJ), Parties' Names: Volkswagen AG vs. European Commission, Case C-594/16–2019

Issues before the Court: In this case, the main issues before the European Court of Justice were "the legality and accountability of Volkswagen's actions". The court needs to determine whether Volkswagen's use of software to cheat emissions tests was lawful under EU vehicle regulations. Second, the court needs to decide whether vehicle manufacturers should be held fully responsible when automated systems or software influence vehicle safety, emissions, or consumer trust. The court needs to examine the scope of EU law in dealing with hidden or deceptive automated technologies in vehicles and the last issue of whether such practices could be justified under any circumstances.

Decision of the Court: The European Court of Justice, after listing both the parties and going through the relevant provisions and evidence, decided that Volkswagen bore full responsibility for installing and using the illegal software and also stated that there are no exceptions for such deceptive practices and that manufacturers could not avoid liability for the effects of their software on vehicle performance and environmental compliance. The decision given by this court reinforced the "principle of accountability" that companies shall be fully "accountable for automated systems" that affect safety or regulatory standards. The court also highlighted the growing importance of transparency and compliance in the age of AI and automated vehicles. Not only this, court also sending a clear message that misleading consumers or regulators through software manipulation is unacceptable and legally punishable[19].

CONCLUSION

The study focused on the automated vehicle and the balance between the humans and machines. It is very important to take appropriate care of both; to deal with it, we need adequate laws which may govern such vehicles perfectly. The upcoming technology related to the automated vehicles which are only governed by the technology is very important to deal with appropriately; it may cause big losses to our society or to the humans at large. Because the whole technology may be hacked or attacked, to save ourselves we need some laws by which

[18] *Waymo LLC v. Uber Technologies Inc.*, No. 3:17-cv-00939 (N.D. Cal. 2018), (Feb. 2018)
[19] *Case C-594/16, Criminal proceedings against Bosch GmbH and Volkswagen AG* [2019] ECLI:EU:C:2019:533, judgment of 17 Dec. 2019

we can deal. The automated vehicles are the future, but currently they are facing main issues, like liability and responsibility. Old legal systems were made for people who drive cars, but with self-driving cars, the responsibility shifts to the people who make the cars, the people who write the software, and the people who run the systems. Here the government should frame laws which may protect the society and treat it fairly. Also, such policies under which the automated vehicles shall be up-to-date according to the time period prescribed by the laws. All the issues can be addressed if the law recognizes AI as a personhood and frames laws & policies which set some liabilities and responsibilities and accountability if anything happens wrong against the individual or against the society at large. Major issues related to the technology shall be resolved; the data protection and privacy of our personal data shall be protected; it shall not be allowed to be out from the concerned jurisdiction under which the automated vehicle works; if it goes beyond, it may be a very dangerous security risk at a large scale, like the protection of data from hackers at an international level, which is not easy. Issues related to ethics and moral values shall be addressed in the trainings for the automated vehicle; if we trained them effectively, the automated vehicle will deal smoothly. The training shall be provided to the human beings and also to the automated vehicles to deal with each other. The government shall come up with the adequate laws which may start the automated vehicle between the humans; it shall come into practicality, not only into the dreams.