

Magnetism in Modern Day Problem Solving with Concepts of Classic Mechanics: Self-Research

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Abstract: *A systematic usage of Electricity and Magnetic concepts under classic mechanics theory with relation to modern day problems of road accidents, Medical Tragedies due to inconvenient traffic jams, unfortunate anomalies found in recently launched Tesla Electric cars regarding its autopilot feature is illuminated here. With the help of this research in order to find solutions to real life applicable problems mentioned above, a different approach is explained briefly. Sustainability is achieved in its process. It is expected to be an expensive but great source of energy is with the possibility of future use of this research methodology. Use of concepts of Classic mechanics to concepts of Electro-Magnetism is hereby raised.*

Keywords: Magnetism, Sustainability, Car accidents, reduced fuel use, Renewable Source of Energy

1. Introduction

Modern culture is an aspect where dilapidated knowledge is getting refined every day. This era revolves around the modernising of culture, traditions and of course science. Even when great discoveries like Motor cars are created, people tend to replenish the idea of a fuel driven motor vehicle to self-driven electric cars. Let's look on to the diversity of ideas that evolved eventually. The idea of electric cars came into existence when there was a need of reusable source of energy which can be used to lower the petroleum fuel emergency. American highways report 1000s of accidents everyday due to either Autopilot anomaly or out of sheer bad luck. (fig. A) A statistical survey of the year 2020, fatal and non fatal car accidents irrespective of its type and models are shown here. (fig. B)

This accounts for an affluence of distress among researchers and scientists. In a single year 2020, people faced fatal accidents causing the mortality rate to shoot up by 15.9% from the last year. So, aren't we in need of a theory of preventing accidents where the cars will be free from being prone to hit another car accidentally?

This lead us to another unanswered question of all time, the reduction of petroleum fuels and converting our usage to more sustainable and reusable source of energies (iv) Scientists are gaining control over the situation quite quickly by brainstorming ideas like bio-gas energy, more usage of solar energy and so on. Sustainability is gaining attention over all other alarming issues. This research develops an initial idea of a systematically approach of lowering of general fuel driven and electric car accidents leading to downturn of loss of property and life and attaining sustainability. A cross connection between both of the issues has been discovered efficiently through this research which lead to a global change of perspective among netizens. Society leads to mass movements. It has been proven scientifically that a mass movement helps to set a remarkable dot on the timeline of history. A similar approach is mentioned below. Classic Mechanics is applied strategically to aid us in these situations. The daily usage of Classic Mechanics circling agitating issues that the world needs to eradicate.

2. Literature Survey

A statistical survey shows us the increase in accident cases causing death fatality over areas of highways. The P.D shows a casual behaviour towards these type of accident cases (i) because it has been so frequent that the reluctance increased. After a long period of safe and secure life of Tesla cars right from 2003 from its official launch, the self-driven autopilot feature betrayed the scientists; the first ever Tesla electric car accident was recorded on June 30th, 2016. Scientists have been researching for an adequate solution of this problem since then. The accident was publicised 54 days of the actual date. (ii) Soon after the first unfortunate incident Tesla launched Model X- (The safest (SUV ,5 star rated). The Model X was renovated in an order to save the driver from any fatal injuries that might happen when unfortunately, an accident occurs. (iii) The loss of property mentioned here surrounds the personal amenities, societal belongings and the spilling of various harmful smokes leading to environmental damage. The increase in global warming and a significant change of weather patterns in areas all over the world has been annoyingly dictating the attention of scientists. It is no new news to all of us that if we are not able to control the drastic climatic changes we might be on the verge of a bigger problem in the future. This research theory shows how the accident probability decreases with the help of Classic Mechanics applicable to any motor vehicles irrespective of fuel driven or electric manual/autopilot featured cars.

3. Methodology

D) Model: The car is itself a metallic material. So, when a normal Magnet is used against the car with a weight that cannot overlay the attraction force of the magnetic force intended by the Magnet, the car moves forward with a significant Frictional constant if we consider the surface to be rough. Now, if we assume a car running on a road with petroleum as a fuel. The petroleum is used as the grease and increase the Energy in the machine which leads to the movement of the machine. If we construct well insulated wires on top of each other under peachment of roads with high electricity flowing through it, a small electro-magnetic

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field is formed. Now, due to the formation of the magnetic field, the metallic materials inside the field will start deflecting if the magnetism is altered by electricity flow in the car itself, as like pole repels. Now, When the Car will start moving against the magnetic attraction force, the car will cross the small point on the wire which was producing the magnetic field for the car at a specific position. As per Newton's Law of Motion, the first law states that "An objects tends to remain at motion if they are initially in motion". Due, to metallic car's inertia, the car moves to the next metallic field radius. In order to enter a second field radius, a minimum thrust is required to pierce into, there is where petroleum is needed to enquire a thrust. Now, as the fields are extremely small, if we integrate them all, the small fields will connect as to a large magnetic field area. So, petroleum is needed for thrust all along, *which is much less than what is actually used*. When, the Car starts, the petroleum is needed to change its rest state to motion, in the process when the car comes under a magnetic field, the electricity that is passed inside the car will create a magnetic field against that produced by the wires. This will nullify the effect of attraction force of the magnetic fields to any other materials around.

(fig. C)

II) Prevention: Now let us assume a hypothetical situation where two cars, A and B are running on a highway with an uniform speed of 40km/hr (more or less) with a considerable distance between them. Both of the cars are mechanised in the way explained in (I) Suddenly Car B has faced any anomaly that occurs it to speed up disorderly and a situation of potential collision arises, the small magnetic field that runs inside the car wires prevents it to collide with the back of car A because of similar magnetic pole produced by car A repels. This makes the car wheel/ steering to deflect from its original position and aid the driver with some time to gain control over the car by then in case of a manual car and accordingly to the auto-pilot feature to detect a potential obstruction coming and stop automatically for an electric car. (fig. D)

III) Accuracy: Now due to a deflection of the steering of the wheel, a deflection of large angle from its original position is estimated for car B. Now when this situation occurs, the driver pushes the full break, which should be detected by the car as a shut down. Thus the electricity cuts, leaving magnetic field only produced by the underlying wires. This phenomenon enforces attractive ability of magnetic field and stops the car without deflecting with a wide angle.

4. Discussion

In the first paragraph (I) of the methodology, a significant process of remodelling of a manual fuelled / Electric Car has been described. A well modelled description is given here. (fig. C) A number of possible aspect rises after a successful testing of this method of transportation. Will it be reliable? Will it be completely safe? Discussions regarding economic wastages will also compete with a successful establishment of this method, as it is going to be expensive. Though, Electricity has been once thought a great discovery of a renewable source of energy (II), it has shown many

degradation once it has been witnessed and used for time, days and years by the people for their need. Accordingly, a similar fate awaits every discovery as the long you get used to it, the more you get bored due to it. Electric cars are still a great deal in the market with their autopilot feature attracts youngsters the most. This research on Magnetism as a renewable source of energy and its usage leads to a great number of things is the starting point of invention of a lot of things in the near future. Anomalies of Electric cars are eradicated consecutively here. No research has been published yet, or no trace of ideas has been recorded yet, so this research awaits a lot of limitations in the near future describing the use of this method frequently in near future.

5. Conclusion

A well summarised form of an effective way of use of Magnetism in day to day life by understanding the basic concepts of Classic Mechanics and its application has been successfully tested (for replica environment) and demonstrated here.

6. Future Scope

6.1 Benefits

- A large amount of usage of petroleum fuels are saved in this process leading to a sustainable evolution of mobility factor among the society. A number of issues like accidents that occurs through manual and electric cars, reduction of global warming has been addressed through this methodology.
- We also often cross over conversations of increasing traffic on highways, Main roads causing a lot of anxiety complexes in ourselves. Medical fatalities occurring due to traffic jams also have been increased immensely in metropolitan areas nowadays. A society based on this research neither will allow a car to collide with each other nor will allow to stand or move too close to each other, reducing accidents causing while overtaking and leave out space for ambulances and Fire truck to move along quickly.
- This research will lead to brainstorm many more ideas as Magnetism will be established as a good source of energy without any harmful residue, or simply lowering of harmful residue formation.
- A new method of formation of Cars provides a lot of man-force and research work in it. This allows a potential increase of employability across use helping in eradication of poverty too.

6.2 Anomaly

- This research has not yet been testified under real life large vehicles which confirms risks of other issues that might fail the actual aim of the process. A serious practical test sets a potential anomaly to any research or idea. Though this process have a great yield on replica of Cars weighing much less than an actual car, it still isn't surely reliable until a full test is done.
- This process may lead to formation of a mega project across the globe which will take a long amount of time to

eventually come into full existence. Expensive method of sustainable energy.

Author Profile



Roshni Chaudhuri is a young researcher mainly based on her experiences in her monotonous everyday existence. Though belonging to not so civilised part of the country, she aspires to achieve the goals she want to achieve. This research is based on her perspective of a road accident causing her to think of a possible solution in retaining this type of dangerous unfortunate incidents to occur in our surroundings.

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Figures

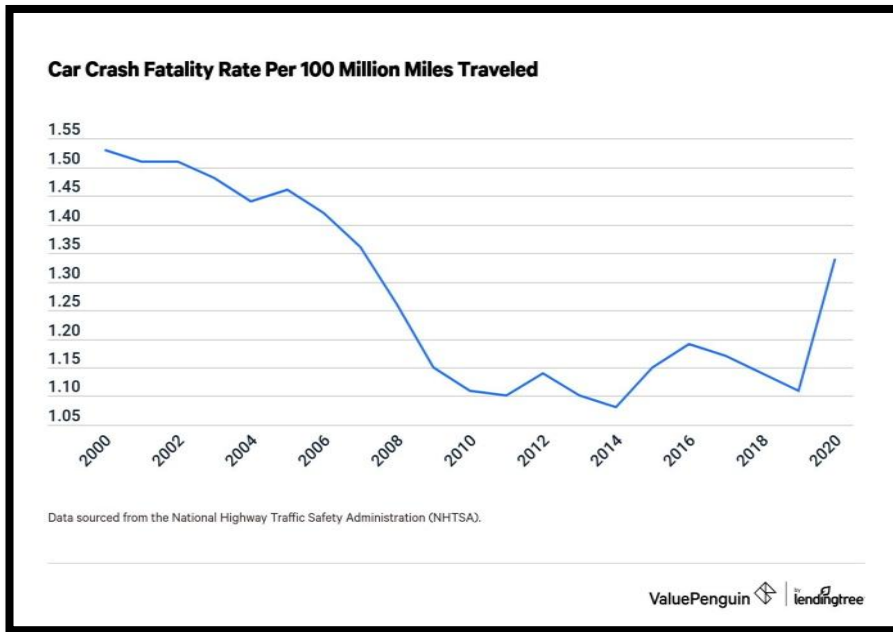


Figure A: A statistical survey on accident cases over years

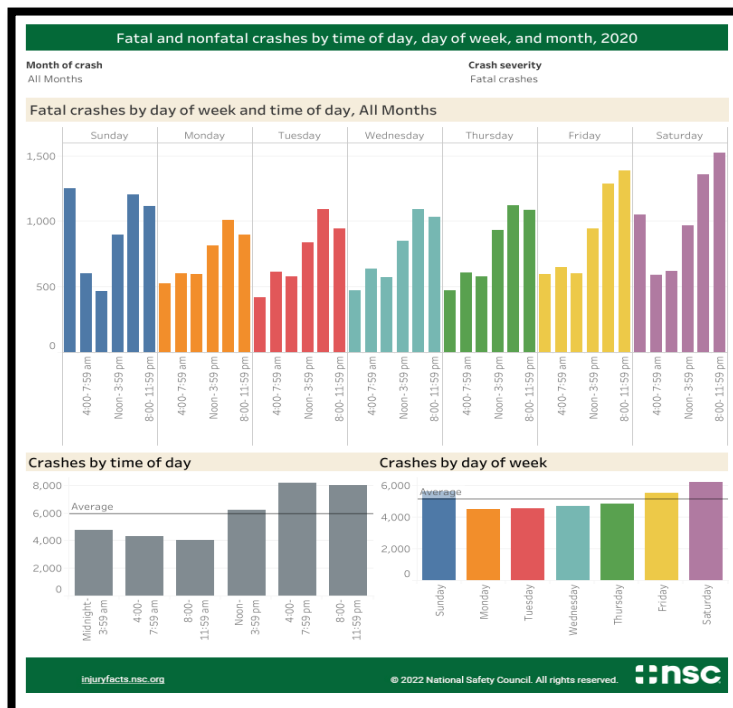


Figure B: A survey of accident cases reported only in the year 2020

