Introduction

The primary purpose of the SDVs and driving assistant is to make "driving" become much safer than the millions of crashes in the world. Driver error was the cause of most of those crashes and after years of technology improvement that provided more assistance to the driver, the driver was taken out of the equation altogether. Now days , back-up cameras, assisted braking, GPS, and stability control systems come standard in many models and have improved performance and safety . These lower level forays into computerized or smart vehicles signal the potential for a more cooperative relationship. With technology companies like Google developing their own self-driving technology for use in existing vehicle models, it appears that technology and car manufacturers may work together on SDV development.

And in our country According to the WHO data published in April 2011, deaths resulting from road traffic accidents in Ethiopia reached 22,786 or 2.77% of the total deaths in the nation. The age adjusted death rate of Ethiopia is 37.83 per 100,000, #12 in the world. Road traffic accidents are becoming a major public safety and development obstacle. Various studies have indicated that Ethiopia has one of the highest fatality rates per vehicle in the world. It is in excess of 100 fatalities per 10 000 vehicles. This should be compared with Kenya and United Kingdom, where the figure is about 19 and 2 per 10 000 vehicles, respectively. Ethiopia loses about $65 million annually due to traffic accidents. In addition the victims are mainly public transport travelers in the working age group (18–30 years).

There are various causes of road accidents in Ethiopia. But the two main contributors are the inexperience of many drivers, adding on the ineffective policies and generally awkward road and vehicle conditions. Several Ethiopians have called on the Ethiopian Road and Traffic Authority to prohibit road side parking on undesignated areas, increase the number of suitable traffic and pedestrian signs, firm traffic law enforcement and speed control, train pedestrians on proper use of road and control the use of narcotics among drivers, among other things. while in Ethiopia, Observers have noted that accidents are caused by Public transportation vehicle drivers who prefer to drive through the night instead of the daytime and drivers who enjoy chewing Khat while driving cause the said are usually the ones who accidents. so in this case if the car can assist them and can control the car slightly the accidents will decrease than before .

Therefore we are interested in reducing the accidents in Ethiopia by making this technology by our self and provide it for our country and people in appropriate for our country. We think if we can make it our self it will be fear in price wise and also suitable for our country.

History & Terminology

It was only a few decades after the introduction of the first Model T Ford that people began to

think about an automated version of the passenger vehicle (Technologizer, 2010). Throughout

the ensuing decades, automotive and technology magazines documented the possibilities and

those working to create “the car that drives itself” (Popular Science, 1958). In the 1950’s

researchers from the major car brands worked on a system of roadway and car modifications

they hoped would result in such a development. TV shows such as the 1980’s Knight Rider

portrayed the self-driving cars movement in the American imagination. Universities and

governments worked on projects to deliver the real thing. During this same time cars were

advancing with new transmissions, more powerful engines, and sleeker makes. The most

ambitious claimed that self-driving vehicles were just around the corner (Technologizer, 2010).

In the 1960’s, a grant from the U.S. federal government set a goal of 1985 for a self-driving

prototype (Popular Science, 1967). Later, in 1991, the US Congress instructed the Department of

Transportation to engage in research to develop “more intelligent vehicle-highway systems” as a

part of the surface transportation infrastructure (H.R. 2950, 1991) . This included transferring

federal technology to state and local governments and investing funds in research around the

country. One of the most high profile developments in federal support for the industry was in the

form of the Defense Research Advanced Projects Agency (DARPA) Grand Challenge in 2004,

2005, and 2007, which provided a lead prize of $1 million for a driverless vehicle (DARPA,

2007). This project brought together teams from around the world in the US, but work was also

completed and technology advanced by governments, universities, and car makers in countries

from Japan to Europe. Indeed, those who participated in these challenges still form some of the

core researchers and engineers seeking to make self-driving cars a reality in their lifetimes

(Bilger, 2013). For decades, people claimed the breakthrough was imminent. Now, it appears, it

finally has arrived.

Given the variously dispersed actors working on self-driving technology, it is no wonder that

while the goals are similar, the name is not. From self-driving, which will be the choice of this

text, to driverless, autonomous, auto-pilot, or connected cars all imply the idea that the car is

digesting data from the environment and taking over a great share of the driving.

Problem Statement

As discussed in introduction part earlier, car accident is a major issue in our country now a days and lot of peoples had lost their life. It is true that, the data that we obtained in any technological and engineering work, it appears that technology and car manufacturers may work together unquestionable. However, the technology based cars are more safe. Observers have noted that self-driving vehicles(SDVs) may change not only the way we drive but also how we use time and how urban landscapes are developed, and people are starting to take notice. There are lots of problems in driving These are some of the problems that can be stated when we talk about car accident 's.

* Lack of experience
* careless drivers who enjoy chewing Khat and take other drugs while driving
* lack of speed controller devices
* tight roads
* Safety ,Most accidents happen because humans are doing something stupid while driving, like checking facebook ,mobile or also changing music on the radio
* Efficiency, Traffic on the road happens because humans can't communicate with each other on the road.

Motivation

change how humans interact with their environment

The majority of students in the secondary schools, especially in grade 9 & 10 had no interest to learn physics and this resulted the low achievement in EGSSCE. In addition to this, the students in the preparatory grades (11&12), had also low interest in physics when compared with other science subjects. Majority of preparatory students choose natural science stream only to join healthy related fields when they will be admitted to higher educational institutes, because they assume that, they cannot cope up physics dominated fields like engineering and technology. Also statistics shows that majority of students scored very poor result in the entrance examination to higher educational institutions, besides this, teachers in these schools had low motivation to teach physics, the reason could be due to some problems encountered in teaching and learning of physics.

So, it is necessary to study the problems that affected the teaching and learning of physics in the general secondary and preparatory schools and provide solution to the problem. In order to alleviate this problem teacher’s and student’s laboratory guide should be available in enough quantity and quality. Laboratories should be furnished with the necessary equipment’s for practical activities. And also there should be properly trained physics lab assistance for setting up apparatus for practical demonstrations and experiments.