

### Summary from 'two page summary'

I will be researching about autonomous cars and what they are all about: their specifications, how companies are adapting this new technology and where this new technology is being implemented. Are they safer to drive than the standard petrol cars we know and use today? I will attempt my best to answer these types of questions within my two pages of the website that our group creates. Self-driving cars are slowly becoming the craze. With Tesla, Apple and Uber all trying to cross the 'auto car line', there seems to be a big award to who releases the first sustainable and suitable model. Autonomous cars edge towards the future, they show us what the world could be like if us humans start to implement avant-garde innovative technology and adapt a no emission behaviour, that's likely why many of the 'self-driving' cars are electricity powered.

### Safety

In 2013, Tesla stated that three Model-S cars were involved in fires, critics prowl the assumption that the car was not safe and could explode, however, looking at how the crash happened, it must have been partially the drivers fault for driving over debris that damaged the battery under the car. Furthermore, if the car had not been equipped with battery cells and their aluminium cover the driver could have been injured badly. Crash tests results for the Tesla Model S conveyed that Tesla S is just as good in handling with crashes as the gasoline-powered cars – meaning it's not necessarily unsafe. However, the Lithium-ion batteries have raised concerns, since they contain a liquid electrolyte that stores energy which could overheat and explode if in the incorrect environment. The power cells could also short circuit and also could also start a fire if damaged and the security standards are missing. NHTSA also states that the tesla model S also protects its battery array with an extra shieling of outside aluminium plate and also has a layer of protections between the many batteries and where the passenger is located, plus received the highest possible ratings for crash tests. Of course all cars need to be safe, however, the model 3 can resist 4 times the mass of itself. It's ridged body and impact protection means the overall structure has a good resistance to crashes. It's centre of gravity is low too, which means that it is less prone to flipping over and obviously: more stable on the road.

### Attract

The most popular electric car as of right now is the 'Tesla Model 3', to understand why let's have a look into the specifications. One obvious reason is that electric get instant power which means for the tesla model 3: it can go from 0 to 60mph in 3.2 secs. The safety regulation of the car is obviously important for the customer too: hard and solid frame vital to protecting the safety of the person inside. The 'dual motor' feature is also a plus, two motors that control the front and the back wheels means that if ever the case of being stuck or one of the motors failing, the person can still drive home with only one motor. Never needing to visit petrol stations again is also a big pro, saving time and money you can just charge your all electric car at a Tesla charging station. Having a 360° view, vision up to 160m and ultrasonic radars, the Model 3 really has a set of valuable awareness assets to help you drive safely. A 15 inch display also allows you to monitor the car's performance, it is also always updating itself trying to improve the quality and human interaction. You can even use your smartphone as the key which is super convenient since almost everyone has a smartphone by their side.

### Tesla

After GM recalled all their electric vehicles, Tesla was influenced to start - on July 2003 with Martin Eberhard and Marc Tarpenning incorporated Tesla. They aimed for commercialising the use of electric cars, selling them online, allowing customisation and moving towards a e-commercial approach. All their designs are available to everybody after they released them to the public - part of the 'open source movement'. Since 2012 their overall sales resulted to 720000 units! Their vision and goal include making elective vehicles (EV) more assessable to everyone. Their strategy of overtaking the dominant gasoline market is by first introducing a sports car aimed at people that adopt early, then moved to the more general public by the introductions of sedans, etc... They also sell their cars online, eliminating the need of physical locations and boosting customisation over the internet. Tesla's relationship with the biggest importers of electric cars (China) is good too, a billion dollars' worth of electric cars have also been sold to them and have even talked about building a factory inside the busy metropolis of Shanghai.

### Apple

Apple have been quiet quite about their driverless cars, until the project "Titan" was found out. They had bought out "drive.ai" since their efforts were dwindling. Currently, Apple is experimenting a group of Lexus RX450h SUVs fitted with LIDAR and radar sensors.

### Uber

After spending a billion of self-driving cars, Uber announced their own one: a Volvo XC90 that has a combination of human control and automated control. In Arizona, self-driving trucks are already being used by Uber. They also are interested to buy lots of self-driving cars from Volvo.

### Waymo

Waymo are leading the commercialisation of self-driving cars on the road, they were the first to launch a robot taxi service and are also selling their lidar technology to companies that don't have competition with them in the 'robotaxi field'.

### Volvo

Using Nvidia's technology, Volvo have implemented them in assisted driven vehicles to analyse drivers and their nearby environment to help Volvo's energy management, personalisation options and finally the automated drive itself. They have also partnered with Uber to produce more self driving cars and release them in 2019. Baidu and Volvo are also researching more about self-driven electric vehicles.

### Best UK electric cars in 2019

Porsche Taycan: This car can fulfilled every need you have when driving, also brisk and smooth when you drive normaly too.

Tesla Model 3: Even though being the cheapest of the Tesla family a 254-mile range is claimed and a boost to 60mph in just over 5 seconds

MG ZS EV: Being a reasonable price, it can sprint to 62mph from 0 mph in only 8.5seconds, can drive over 163 on one charge and suits the needs of families because of its big spacious boot and seats.

Audi e-Tron: An SUV style car featuring front wing charging and 62 mph in only 5.7seconds, this car is an all-rounder normal car that can cover 248 miles with a charge.

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