
RevMag
Issue 002

RevMag

SPRING 2021

Editors in Chief

Leonardo Hess

Mazyar Azmi

Magazine Design

Leonardo Hess

Writers

Arman Azmi

Brandon Kuo

Leonardo Hess

Riya Daga

Tuhin Ghosh

Illustrators

Avani Khorana

Felix Brener

Leonardo Hess

Faculty Advisor

Fred Levy

Contents:

Electric Racing

Tuhin Ghosh

Motorsport

1

Also known as Electric Motorsport, Electric Racing has been popularized during the 21st century but did exist in some form during the 1900s. Many electric cars held land speed records before combustion engines proved themselves to be superior in the late 1900s. With the recent innovation due to a necessity for lesser carbon emission, Electric racing has begun to take full form with multiple races including a Formula E, Isle of Man TT race, and even collegiate level competitions.

Formula E is quite similar to Formula 1 except for a few differences in the rules due to the nature of electric racing. One rule that has been added is that electric racecars can not stop for any "pitstops" where they can recharge their battery.[2] This has forced Formula E teams to come up with innovative methods for the cars to last for the entire race and go at high speeds. This also has quite a few applications in the real-world field of electric vehicles since most of the teams are backed by legitimate

car manufacturers. Some of these companies include Jaguar, Mahindra, Nio, Porsche, BMW, Audi, and many more.[3] In the efforts to create long-lasting and efficient batteries, manufacturers have been able to implement similar changes into their commercial vehicles as well, making Electric Racing the foundation for commercial electric vehicle innovation. BMW, for example, has an electric mini cooper that shares the same electric motor control coding as their i3 racecar.[4]

Another regulation in Formula E is that the battery of every car must be the same 52 kWh battery and their build must also all be the same.[5] This means that teams must find various solutions to increasing the efficiency and speed of their racecars. BMW has resolved to using various materials such as resin and titanium to reduce the weight of the car body.[6] With a lighter car, the BMW racecar will be able to move faster throughout the race. This regulation of the car body is different from Formula 1 where teams can choose what body they would like to use within certain regulated dimensions. This makes the strategy of manufacturing racecars in the two sports very different.

While racing in Formula E may seem cheap, some teams have spent upwards of half a billion dollars a year to race. This has forced a 150 million dollar cap on spending on any Formula E team.[7] On an interesting side note, Jaguar only spends about 12 million dollars a year on their team which is a very big difference from other teams.[8] Cost-cutting has also been done to reduce the environmental footprint of Formula E teams beyond their use of electric vehicles.[9] By reducing the cost of each team and other caps on material such as tires that can be used, teams have fewer people flying to various destinations and smaller carbon footprints due to less manufacturing. Ultimately, professional electric racing has been popularized as an environment-friendly sport and has inspired commercial innovation in the electric vehicle market.

There are other types of electric races that are not of the professional caliber such as the World Solar Challenge (WSC) in Australia. The challenge invites collegiate and high school teams to create an electric car that can be powered through solar energy. These cars must complete the 3-day long race that spans over 3000 miles through rural Australia.[10] There are different classes of cars that classify the size and capacity of cars. For example, the challenger class is on the smaller side with sufficient capacity for solar panels. Logically, with more space for solar panels comes more mass requiring more energy to move.[11] Teams have to find the perfect balance in order to emerge victorious in this annual race. Often, colleges have their own circuits, and Purdue, the University of Michigan, and the University of Pennsylvania all have their own circuits.[12] The WSC is a race that is focused on endurance rather than speed much like the FIA World Endurance Championship.

The future of electric racing is also

looking bright with new racing circuits being formed by companies like SuperCharge. The managing director of SuperCharge Rob Armstrong said, “With many countries and cities already announcing plans to ban internal combustion-engine cars in the coming years, the need for road car-based electric motorsport is becoming more and more compelling,” in a Classic Cars journal article.[13] The company SuperCharge is planning to revolutionize the way racing is thought of with once-in-a-race shortcuts, portions with reduced friction, and jumps to make the race much more interesting for the audience.[14]

“In my career, I’ve found that for a new motorsport to grow successfully it has to appeal to a young demographic, as well as the major car manufacturers. The excitement of electric acceleration, high-performance and cutting-edge technology, combined with the tempo of the race day, will tick both boxes and in turn ensure a very successful series,” said driver Tanner Frost in the news release of the race.[15] The format will also include the last driver being eliminated every round which is a change of pace from traditional racing styles even in electric racing.[16] SuperCharge is looking to lead the future of electric racing with its innovative racing track and style and is sure to pave the road for the success of electric racing for years to come.

SOURCES:

1: *Double Points Finish for Panasonic Jaguar Racing to Start Formula E Season Five*. Photograph. Flickr. December 15, 2018. Accessed June 6, 2021. https://www.flickr.com/photos/jaguarcarsmena/44517957710. Image License: https://creativecommons.org/licenses/by/2.0/

2: Berk, Brett. "How Formula E Racing Makes Electric Cars Faster, Smarter, Funner." Wired. Last modified July 20, 2019. Accessed June 4, 2021. https://www.wired.com/story/formula-e-electric-car-tech-transfer/

3: "Teams + Drivers." Formula E. Accessed June 4, 2021. https://www.fiaformulae.com/en/championship/teams-and-drivers.

4: Berk, Brett. "How Formula E Racing Makes Electric Cars Faster, Smarter, Funner." Wired. Last modified July 20, 2019. Accessed June 4, 2021. https://www.wired.com/story/formula-e-electric-car-tech-transfer/.

5: Berk, Brett. "How Formula E Racing Makes Electric Cars Faster, Smarter, Funner." Wired. Last modified July 20, 2019. Accessed June 4, 2021. https://www.wired.com/story/formula-e-electric-car-tech-transfer/.

6: Berk, Brett. "How Formula E Racing Makes Electric Cars Faster, Smarter, Funner." Wired. Last modified July 20, 2019. Accessed June 4, 2021. https://www.wired.com/story/formula-e-electric-car-tech-transfer/.

7: Brownell, Bradley. "Notoriously Inexpensive Formula E Is Getting Even Cheaper." Jalopnik. Last modified July 2, 2020. Accessed June 4, 2021. https://jalopnik.com/notoriously-inexpensive-formula-e-is-getting-even-cheap-1844239782.

8: Brownell, Bradley. "Notoriously Inexpensive Formula E Is Getting Even Cheaper." Jalopnik. Last modified July 2, 2020. Accessed June 4, 2021. https://jalopnik.com/notoriously-inexpensive-formula-e-is-getting-even-cheap-1844239782.

9: Brownell, Bradley. "Notoriously Inexpensive Formula E Is Getting Even Cheaper." Jalopnik. Last modified July 2, 2020. Accessed June 4, 2021. https://jalopnik.com/notoriously-inexpensive-formula-e-is-getting-even-cheap-1844239782.

10: "Chasing the sun: the World Solar Challenge 2019 – in pictures." The Guardian. Last modified October 19, 2019. Accessed June 4, 2021. https://www.theguardian.com/environment/gallery/2019/oct/20/chasing-the-sun-the-world-solar-challenge-2019-in-pictures.

11: "Chasing the sun: the World Solar Challenge 2019 – in pictures." The Guardian. Last modified October 19, 2019. Accessed June 4, 2021. https://www.theguardian.com/environment/gallery/2019/oct/20/chasing-the-sun-the-world-solar-challenge-2019-in-pictures.

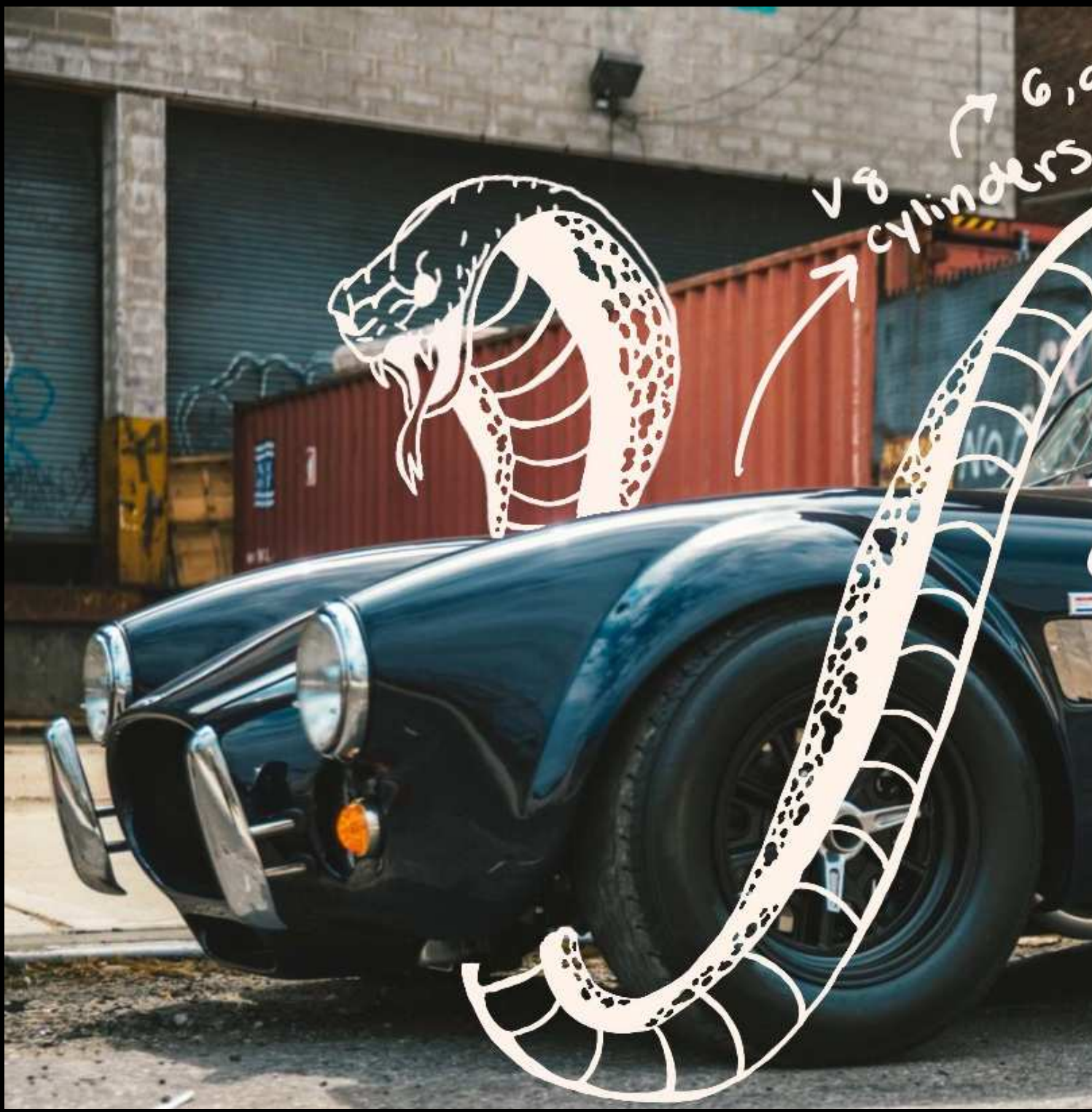
12: "About Purdue Electric Racing." Purdue Electric Racing. Accessed June 4, 2021. https://engineering.purdue.edu/esae/a/about/.

13: Edsall, Larry. "New electric racing series promises electrifying action." ClassicCars.com. Last modified November 1, 2020. Accessed June 4, 2021. https://journal.classiccars.com/2020/11/01/new-electric-racing-series-promises-electrifying-action/.

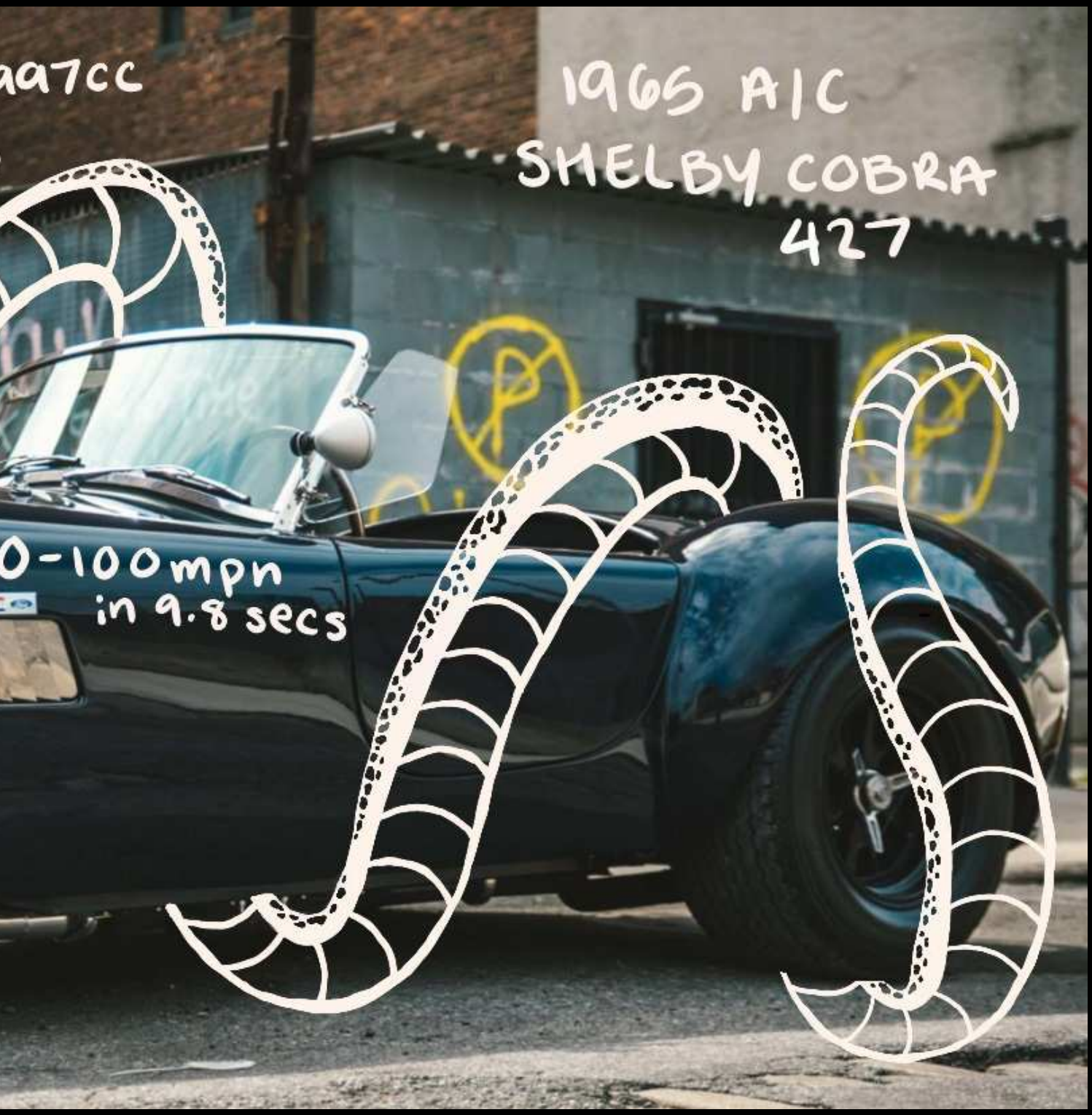
14: Edsall, Larry. "New electric racing series promises electrifying action." ClassicCars.com. Last modified November 1, 2020. Accessed June 4, 2021. https://journal.classiccars.com/2020/11/01/new-electric-racing-series-promises-electrifying-action/.

15: Edsall, Larry. "New electric racing series promises electrifying action." ClassicCars.com. Last modified November 1, 2020. Accessed June 4, 2021. https://journal.classiccars.com/2020/11/01/new-electric-racing-series-promises-electrifying-action/.

16: Edsall, Larry. "New electric racing series promises electrifying action." ClassicCars.com. Last modified November 1, 2020. Accessed June 4, 2021. https://journal.classiccars.com/2020/11/01/new-electric-racing-series-promises-electrifying-action/.



Avani Khorana


a97cc
1965 A/C
SHELBY COBRA
427
0-100mph
in 9.8 secs

Why you can't be a Formula 1 driver.

Riya Daga

Opinion

Formula 1 is arguably the most competitive sport in the world due to its high stakes. There are only 20 driver seats, and the average driver will race in F1 for about 7-10 years, which means that there aren't many opportunities for new drivers. Due to the nature of the sport, not only is it competitive physically, but it is also competitive financially and mentally. Drivers know that whenever they enter the car there is a lot of money on the line, and they are risking their lives. Let's explore the factors that make racing in F1 fiercely competitive.

Even if you are talented, there is so much more to reaching F1 than skill. Being the best of the best skill-wise is a colossal challenge on its own. Driving skill doesn't come out of thin air; it requires years and years of experience and devotion to the sport. Even if there was a racing prodigy born with incredible racing talent, their parents would still have to be able to afford the exorbitant costs of karting, which starts at a mere three or four years old. After that, young drivers have to climb the ranks through various junior formula series, where anything less than first place is enough to cost them their careers. Climbing these ranks also means securing funding through sponsors while creating a brand for yourself. Motorsport requires a lot of financial support; between tires, cars, gear, and travel, racing is not cheap. For example, a Formula 1 car costs, on average, about 12.2 million dollars to make, without taking into account research and development.[1] In 2019, the ten teams on the grid spent between 132 to 484 million dollars throughout the whole season.[2] In the midst of all of this, luck is also a factor, and meeting the right people at the right time is a big component. It is a common misconception that having skill attracts the necessary attention, but there are so many other extremely talented drivers from around the world fighting for the same position as you.

Adding onto the immense competition for a seat, drivers are often competing with people who have "paid" their way into F1. Having good results in junior formula series does not guarantee you a spot in F1. For example, Callum Illot,

Leonardo Hess

who finished in second place for the 2020 Formula 2 season, did better than Nikita Mazepin, who finished fifth. However, Mazepin was granted an F1 seat for the 2021 season, and Illot was not. Mazepin's father, a billionaire, gave lots of financial support to Haas F1, a Formula 1 team rumored to have been in financial trouble at the time, in an understanding that Mazepin would then get a seat to drive for Haas in the next season. Another example of a "pay-to-drive" driver is Lance Stroll, although he has proven that he is deserving of his spot in F1 throughout his career. Initially, Stroll was very unpopular as people thought it was just his father's checkbook that granted him a seat, and that he didn't have the driving skill to deserve the position. Part of the problem was that he never raced in F2 like most other rising drivers; after F3 he went straight to race for Williams in his debut season in Formula 1.

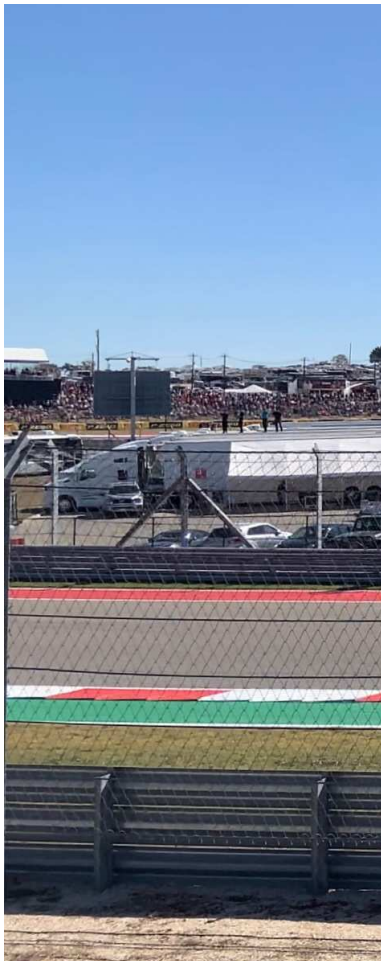
Another factor that can affect a driver's chances is legacy. Many drivers had fathers who were extremely successful, well respected, and talented racing drivers. Some current F1 drivers who carry legacy in motorsport are Max Verstappen, Mick Schumacher, and Carlos Sainz Jr.

There have been notable exceptions to both the paid and legacy routes. The most recent example being Sir Lewis Hamilton. The British driver comes from humble backgrounds, and his father worked four different jobs to provide enough money to keep Hamilton's racing career afloat. At 13 years of age, Hamilton was signed onto the Mercedes Driver's Academy where his journey to F1 became turbocharged. Despite facing many economic and racial challenges, he proved himself as a truly legendary driver. Breaking more records

than can be counted, advocating for human rights issues, being a black driver in a field dominated by white drivers, taking home the most race victories, being instrumental in helping Mercedes achieve the most consecutive Constructor's Championships in history, and equalling the great Michael Schumacher in World Champion titles, he is very possibly the best racing driver to ever exist.

Staying in the sport is yet another challenge; many drivers have only managed to remain in the sport for less than 5 years. Drivers spend most of their lives fighting their way up the ladder, and give up their education to try and reach their goal. Many youth racers join driver development academies, like the ones from Ferrari, Red Bull, Mercedes and McLaren. But, drivers need to be 18 years or older to obtain their Super License in order to race in F1. For the drivers who do make it, if they are not able to keep their seats in F1, there are still many other options available in motorsport, like in Indycar, IMSA, and Le Mans. That being said, there can only be one pinnacle.

If you are able to get to F1, finding success is a whole other beast. It's difficult for drivers to differentiate themselves from all the other talent, which can often lead to drivers getting replaced. Part of making a name for yourself on track is being on a team that is able to score points. Without knowing of George Russell's success prior to entering F1, many people do not know the caliber of driver that he is. This is partly because he is racing with Williams F1, who have struggled immensely in recent seasons. In Bahrain, at the 2020 Sakhir Grand Prix, with the unique opportunity to drive the Mercedes car for a single race, Russell showed potentially championship-winning skills with his track etiquette and strategy. He showed that the car and team matter a whole lot when demonstrating one's skills as a driver. Nico Hulkenberg, Kevin Magnussen, and Romain Grosjean are examples of recent drivers who have left F1 after being in the sport for a handful of years without major success.



I apologize for the rather pessimistic take on the path to F1, and as a true fan I can say that this sport has its challenges. But, Guenther Steiner, the team principal of Haas, once said that "the highs are very high and the lows are really low," but the highs are worth it in my opinion. If you believe in yourself and are passionate about the sport, then the journey is all worth it.

Leonardo Hess

SOURCES:

1: Jindal, Subham. "F1 Car Cost 2020: How Much Does an F1 Car Cost in 2020, Which Formula 1 Team Spends Most? F1 Car cost 2020: How Much Does an F1 Car Cost in 2020, Which Formula 1 Team Spends Most?" The SportsRush. Last modified August 16, 2020. Accessed June 2, 2021. https://thesportsrush.com/f1-news-f1-car-cost-how-expensive-are-the-formula-1-cars-which-teams-spend-the-most-on-their-cars/.

2: Fair, Asher. "Formula 1: What Are Current Team Budgets with $175M Cap Impending?" Fansided. Last modified 2020. Accessed June 2, 2021. https://beyondtheflag.com/2019/11/06/formula-1-current-team-budgets-175m-cap-impending/.

Leonardo Hess

MAX VERSTAPPEN

The #1 driver for the RedBull Honda Formula 1 team

Max Verstappen

Arman Azmi

Driver Profile

Born: September 30, 1997

Series raced in: Formula 1

Active years: 2014 - present

Teams: Toro Rosso, Red Bull

Race Starts: 125

Wins: 12[1]

2

At just 17 years old, Max Emilian Verstappen burst onto the Formula 1 scene as the youngest driver to ever take the wheel and compete in the Formula 1 Championship Series.[3] It was always Max Verstappen's destiny to be among the very best; his father, former F1 driver Jos Verstappen, engrained the 'if you're not first, you're last' ideology into his head from a very young age.[4] While Max was attending school during the day, his father would be preparing the chassis and engine of his son's kart so that they could practice on the track two to three days a week.[5] But this tough love that Max experienced didn't always manifest itself kindly. In an interview with Red Bull, Jos and Max reflect on Max's last year of racing karts. They recall one practice session during which Jos told his son that he was "driving like a potato."[6] All it took was one thump on the head for Max to recognize what he had to do. He won the next race and all the following ones.

After proving he was a force to be reckoned with, Max kept pushing even more. And it took no time for him to prove that he is a monster when he gets out on track. Before him, Red Bull was known as a midpack team, not the worst, but certainly not the best. In 2015, his debut year in F1, Max raced for Toro Rosso, a sister team to Red Bull, that was known as one of the worst teams in the sport due to their consistent bottom 5 finishes year after year.[7] His first season with Toro Rosso wasn't anything remarkable, but the higher ups at Red Bull noticed something special within him. Four races into his second season, he was promptly moved up to bigger and better things at Red Bull.

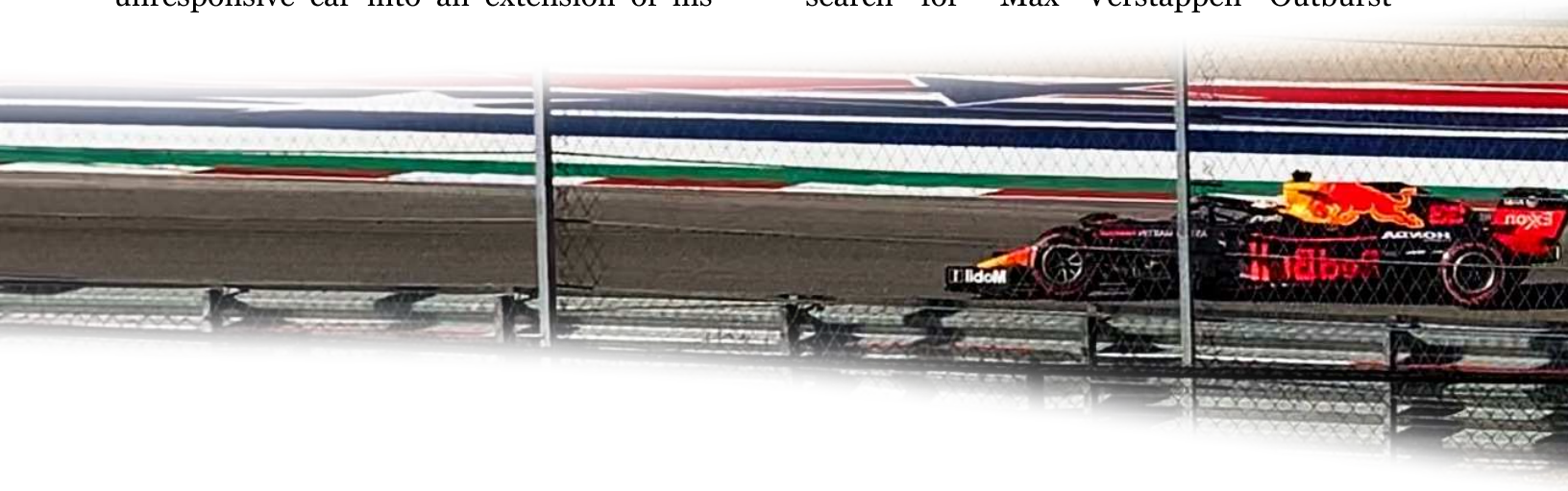
In Max's early racing years, it was clear that he was cut from a different cloth. Even into the beginning of his Formula 1 career, he was seen as extremely talented. But, during the 2016 Spanish Grand-Prix, his first race with Red Bull, not only did he show that he was fit for that position, but he annihilated everyone's expectations. After a strong 2nd place finish in the 2009 season, Red Bull seemed to be teeming with energy. The team was a dominant powerhouse in the early part of the 2010-2020 decade, winning the constructors championship 4 years in a row from 2010-2013.[8] But from 2014 on, any chance of winning the Constructors Championship was gone. Mercedes-AMG had just signed a promising young driver, Lewis Hamilton, creating an unbeatable combo with the young Nico Rosberg. With Lewis leading the team, Mercedes won 7 championships in a row.[9] By this point, Hamilton's talent was undeniable, but many argued that the sport was becoming increasingly uncompetitive.[10] The gap between Mercedes and the other teams was increasing, but Max was not defeated. Despite having a mechanically inferior machine with little chance to become world champion, Max still put his

monstrous talent on display.

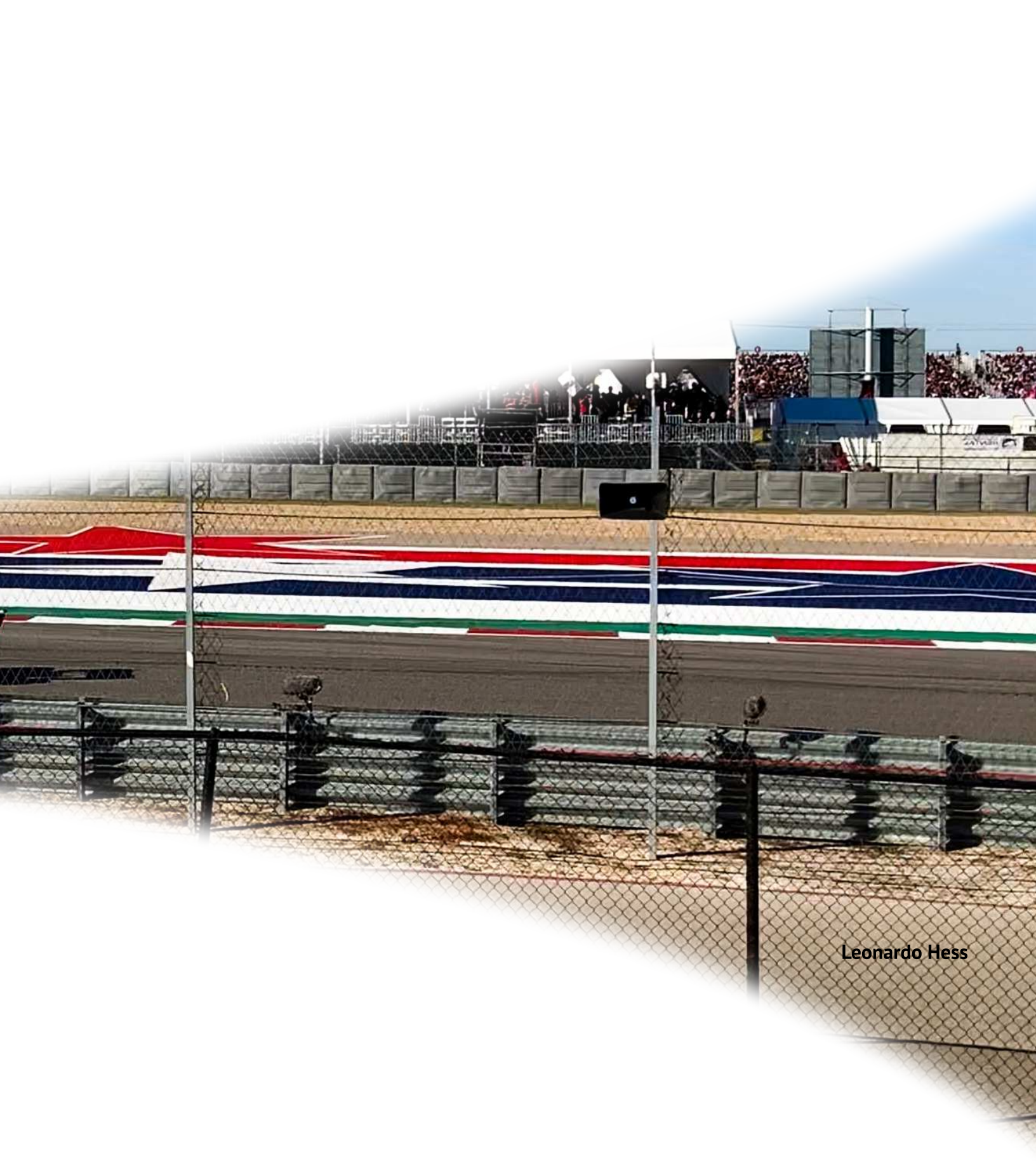
When comparing the year-by-year F1 Constructors Standings for Red Bull, we see an outstanding 281 point increase for the team the year Verstappen joins.[11] A team that was previously in the category of 'good, but not great' was carried into the spotlight on the back of Max Verstappen.

Verstappen possesses two abilities that no other F1 driver has to the extent that he does: adaptability and a nose for victory. He was able to turn an uncompetitive and unresponsive car into an extension of his own body, and he's able to visualize driving lines in the rain that other drivers can't see. Verstappen can sense a gap in a way that no other driver can, and once he's in the car, his decisions are made largely in part based on that sense. When he's on the track, he tunes out the rest of the world, and makes decisions based off of his instinctive racing style.

While Max has a history of solely relying on his instinct, there have been some situations where that instinct ended up hurting him more than helping him. During the qualifying of the 2019 Mexican GP, Valtteri Bottas, a Mercedes driver, had crashed out on the last turn of the circuit.[12] Verstappen was in the middle of a qualifying lap and was aware that Bottas had crashed, but he didn't slow down at all and instead decided to complete his lap. That lap was the fastest of the entire session, putting Max on pole position for the race, but he was given a three-place grid penalty as well as two penalty points as a result of disregarding the rules. It wasn't a one-time thing, though. A quick internet search for "Max Verstappen Outburst" reveals no shortage of results.



The current 2021 Formula 1 World Championship is the best opportunity he has had so far to become World Champion, and in fact, five races into the championship, Max is currently in the lead.[13] Max still has a long way to go to become the next world champion, but he is on the right track. He has matured greatly over the past few years, he's gained lots of confidence on the track, and, most importantly, he's learned from his mistakes.



Leonardo Hess

SOURCES:

1: "Max Verstappen." Formula 1. Accessed June 6, 2021. https://www.formula1.com/en/drivers/max-verstappen.html.

2: Morio. *Max Verstappen 2017 Malaysia*. September 30, 2017. Photograph. Accessed June 6, 2021. https://commons.wikimedia.org/wiki/File:Max_Verstappen_2017_Malaysia_2.jpg. Image License: https://creativecommons.org/licenses/by-sa/4.0/deed.en

3: "Max Verstappen." ESPN. Accessed June 6, 2021. http://en.espn.co.uk/f1/motorsport/driver/171391.html.

4: Mitchell, Scott. "'Tough Love', Curious Methods: The Making of Max Verstappen." The Race. Last modified February 8, 2021. Accessed June 6, 2021. https://the-race.com/formula-1/tough-love-curious-methods-the-making-of-max-verstappen/.

5: "CarNext.com Presents: Keeping up with the Verstappens, ft. David Coulthard." Video, 58:32. YouTube. Posted by CarNext.com, November 27, 2020. Accessed June 6, 2021. https://www.youtube.com/watch?v=NzdaAUU7Da8.

6: "CarNext.com Presents: Keeping up with the Verstappens, ft. David Coulthard." Video, 58:32. YouTube. Posted by CarNext.com, November 27, 2020. Accessed June 6, 2021. https://www.youtube.com/watch?v=NzdaAUU7Da8.

7: "Max Verstappen." Wikipedia. Accessed June 6, 2021. https://en.wikipedia.org/wiki/Max_Verstappen.

8: "Red Bull Racing." Wikipedia. Accessed June 6, 2021. https://en.wikipedia.org/wiki/Red_Bull_Racing.

9: "Mercedes-Benz in Formula One." Wikipedia. Accessed June 6, 2021. https://en.wikipedia.org/wiki/Mercedes-Benz_in_Formula_One.

10: Geertsen, Rasmus. "IS THIS THE LEAST COMPETITIVE DECADE EVER?" Drivetribe. Last modified 2020. Accessed June 6, 2021. https://drivetribe.com/p/is-this-the-least-competitive-decade-AHPYPwwQSLyvMB0TOtUdRQ?iid=FbU8uH__QBCG_4S78IcwWw.

11: "Red Bull Racing." Wikipedia. Accessed June 6, 2021. https://en.wikipedia.org/wiki/Red_Bull_Racing.

12: "Press vs Verstappen: Immature and arrogant." planetF1. Last modified October 30, 2019. Accessed June 6, 2021. https://www.planetf1.com/news/press-vs-verstappen-immature-and-arrogant/.

13: "2021 Driver Standings." Formula 1. Accessed June 6, 2021. https://www.formula1.com/en/results.html/2021/drivers.html.

The PORSCHE 911 GT3RS

Leonardo Hess

The BUGATTI CHIRON

Leonardo Hess

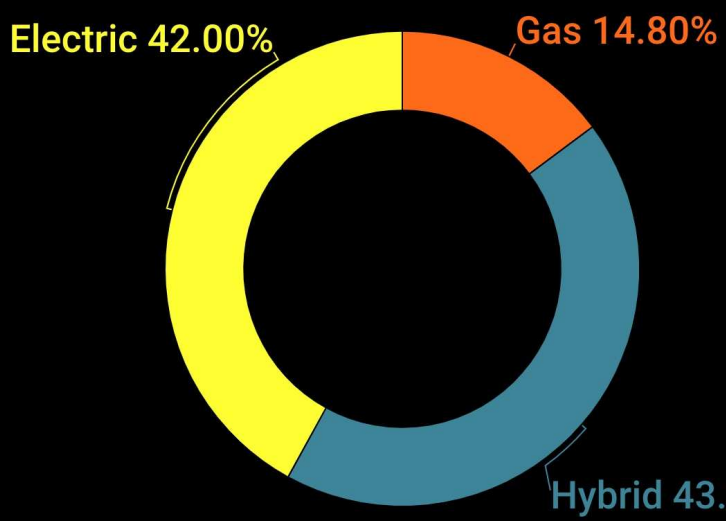
Do students prefer electric, hybrid, or gas powertrains?

Leonardo Hess **Poll**

In this poll, we surveyed students in the Upper Division on their preferences between electric-powered, hybrid-powered, and gas-powered cars. We asked respondents the following: “You can buy any car and put an electric motor, hybrid system, or gas engine in it. Which do you choose?” We then compared these results with whether or not students knew a friend or family member who owned an electric, hybrid, or gas car. The results show that knowing a friend or family member who owns an electric car increases one’s chances of preferring electric, and decreases one’s chances of preferring hybrid or gas. In addition, knowing a friend or family member who owns a hybrid car increases one’s chances of preferring electric, has no effect on one’s chances of preferring hybrid, and decreases one’s chances of preferring gas. It is difficult to measure the effects of knowing a gas car owner, because nearly everyone does, so there is not enough data to measure the preferences of people who do not know a gas car owner. The results from the 88 respondents are shown on the right.

Electric | Hybrid | Gas

You can buy any car and put an electric motor, hybrid system, or gas engine in it. Which do you choose?



For respondents who know someone who owns an electric car, how do their responses differ?

Electric: + 6.9% Hybrid: - 4.9% Gas: - 2%

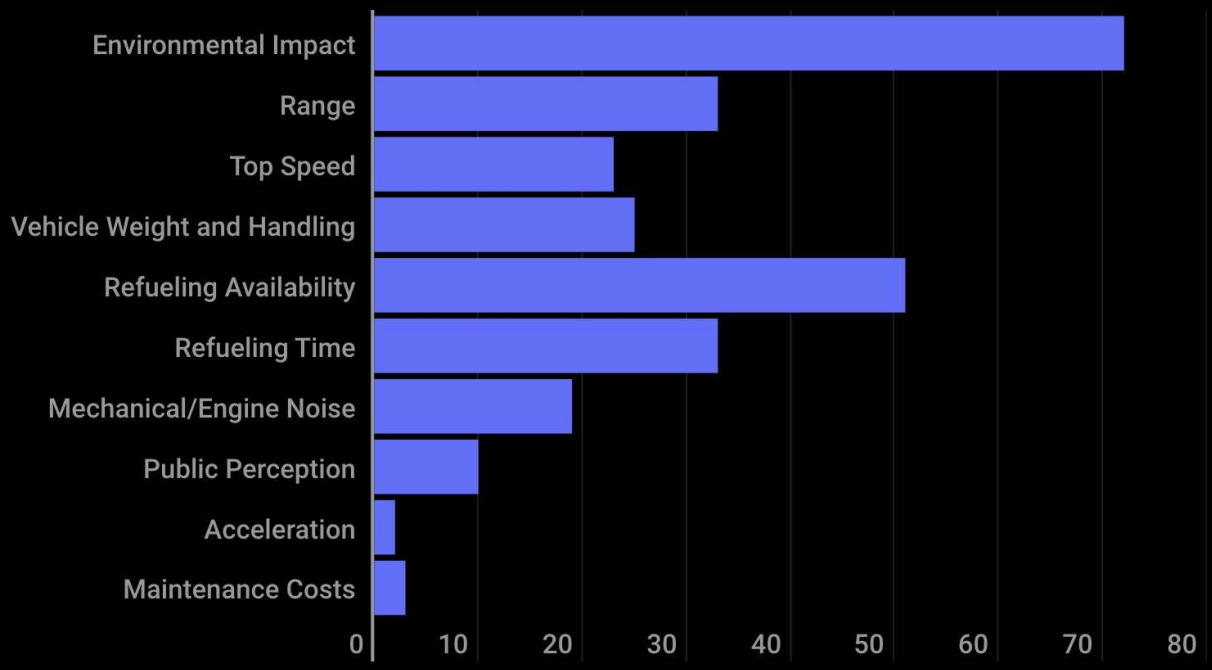
For respondents who know someone who owns a hybrid car, how do their responses differ?

Electric: + 5.7% Hybrid: + - 0% Gas: - 5.7%

For respondents who know someone who owns a gas car, how do their responses differ?

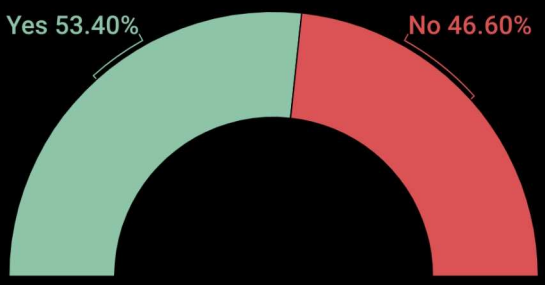
Electric: - 0.6% Hybrid: + 0.5% Gas: + 0.1%

Most important factors when deciding between electric, gas, and hybrid powertrains:



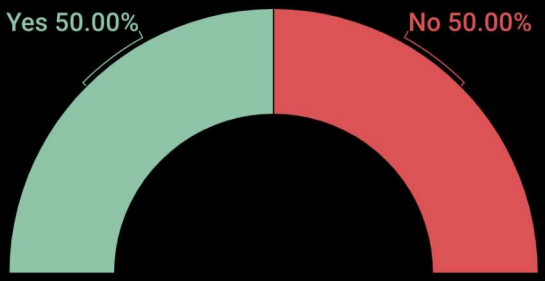
The results above indicate that the main factors considered when deciding between using an electric, hybrid or gas powertrain are environmental impact, refueling availability, range, and refueling time.

Do you have a family member or friend who owns an electric car?



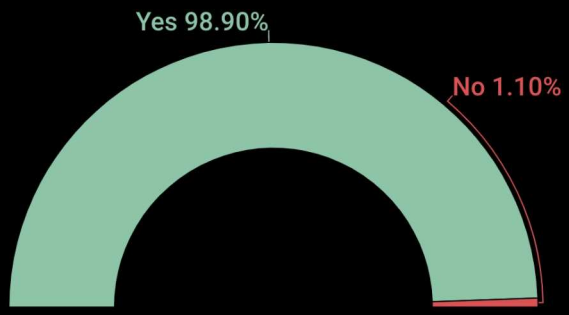
Share Made with infogram

Do you have a family member or friend who owns a hybrid car?



Share Made with infogram

Do you have a family member or friend who owns a gas car?



Share Made with infogram

Leonardo Hess

Maserati Quattroporte

Brandon Kuo **Car Profile**

How does a car company stand out? If you're Maserati, you stand out because you're Maserati. In the United States, it's the only semi-attainable Italian car brand that isn't the butt of jokes; Italians cars are infamous for their poor reliability and high costs. On the other hand, the Quattroporte, one of Maserati's four-door sedans, is a beautiful vehicle, deserving of only the highest praise.

In the luxury sedan segment, where the Germans reign supreme with their immensely boring design, the Quattroporte is a wild, seductive, and untamed breath of fresh air. Its hood slopes dramatically down to a pinched ovoid grille, and its sweeping greenhouse cabin is underlined by a razor sharp body line and voluptuously flared fenders. Yet, you'll only see it on the roads a fraction of the time you'll see its competitors, like a Mercedes-Benz S-Class. Having previously owned an S-Class, I can easily tell you that there's more passion in the Quattroporte's rear door than there is in the entire Merc. But, there's more *refinement* in an S-class's window switch than there is in the entire Quattroporte—particularly an all-wheel-drive model like the one tested here.

At low speeds, the Q4 AWD electronics are finicky at best, occasionally dragging the tires like a locked differential in a purpose-built off-roader. However, the rear-biased AWD system gives the car a distinctive sports car feel when cornering, while still giving you the advantages of all-wheel-drive when necessary. Maserati offers two different drivetrains for the Quattroporte: there's a twin-turbo 3.0-liter V-6 in the S model (which makes a healthy 424 horsepower) and a 523-hp twin-turbo V-8 in the Quattroporte GTS. Both come with an eight speed automatic transmission. Having owned the V-6, I can tell you that

the exhaust note on start up and at low speeds is quite impressive. If you're lucky, when you upshift between 3000 and 4000 rpm you might get to indulge in some pops and crackles, if the backfire gods are feeling generous. The upshift in this range is also notably louder than in any other range. Otherwise the car is rather quiet.

Many would say this car is overpriced or not as luxurious as the S class or the BMW 7 series. However, this car, for around the same price, has a swag factor that the others just don't have. It's more fun to drive, it's more pleasing to look at, and it stands out more. If you are interested in these aspects of a car then I would recommend the Maserati Quattroporte over any of its competitors.

Brandon Kuo