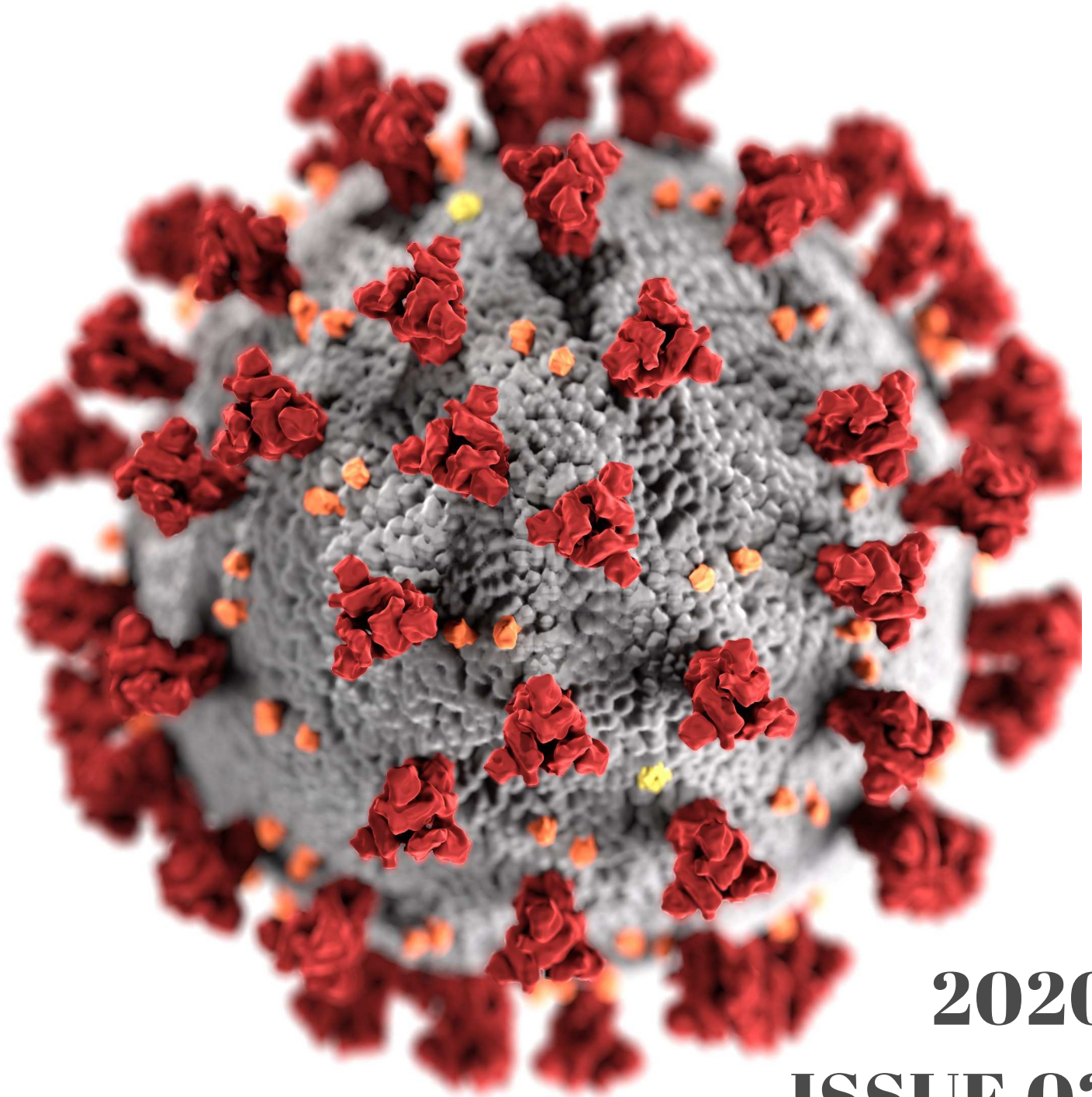


Kairos

The annual journal of The Covenant Preparatory School



2020
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THE
COVENANT
PREPARATORY
SCHOOL



From the Editor

Quarantine makes it seem like time has stopped. We are frozen somewhere in mid-March, just on the brink of the last quarter of school, just at the beginning of spring. But though it doesn't seem right, time has marched on, and quarantine has been the background for these students' final semester of high school.

When the first case of coronavirus in Houston was reported, we were all in Orlando's Universal Studios on senior trip. The students had just finished writing their rhetoric speeches and composing their abstracts to send to panelists, while I was busy planning Rhetoric Day on the school campus. But in a week's time, all of our end-of-the-year expectations were shattered.

It is in these circumstances that the importance of Rhetoric emerges. Rhetoric is about speaking truth into critical moments. In fact, the name of this journal, *Kairos*, is a Greek word that refers to time in terms of opportunity. The question that motivates us each year in Rhetoric is how do we speak truth at a particular time in a particular place? Though the pandemic has unfortunately reframed our Rhetoric 2020 experience, it has also reframed our answer to this perennial question, and offered the opportunity to these students to apply their research to this unique situation.

In this second issue of *Kairos*, the seniors have written on their rhetoric topics, but with an eye to COVID-19. You'll encounter everything from genetic editing as a cure for the virus to why it was a good idea to cancel sports for the rest of the season. You'll also see snapshots of our seniors in their quarantined lives, from face masks to home workspaces.

Though this school year is ending in the midst of even more unknowns and possibilities, I am sure of this: these students have grown into thoughtful writers, confident speakers, and even more wonderful people than they were at the beginning of the year. I've been lucky to journey with them not only through their academic studies, but also during this crisis.

May these students inspire us all to think carefully and critically of our time and place.

Sincerely,
Allison Garde

“ *It is in these circumstances that the importance of Rhetoric emerges. Rhetoric is about speaking truth into critical moments.* ”



Senior Rhetoric



Senior Rhetoric is a tradition in classical education and the capstone for a student's completion of the Trivium. For the entirety of their education, classical students have been trained to master their own language through writing and speaking, to think carefully and deeply, and to argue with wisdom and clarity. During their senior year, they put these skills to the test in the pursuit of one topic. After careful research and writing, students present their ideas to the school community and a panel of experts, to which they must defend their conclusions. This capstone experience gives students the opportunity to grow both in their academic abilities and in their search for truth.

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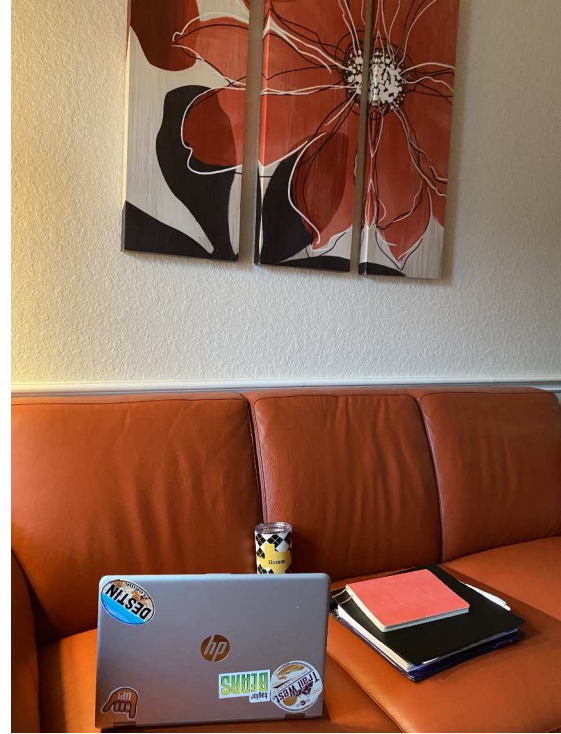
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“ *This coronavirus experience has taught me to not take things for granted, because they could be gone in a swift moment. There are definitely things I would love to do differently in my last moments of senior year, but I can't. And that's okay! This situation has me excited for what's next in my future and trying to stay positive on even the hardest days.*

Dionni Thompson



“ *Rhetoric has taught me how to commit to a year of tough and rigorous work and not give up. I have further developed my writing and speaking skills thanks to the help of Mrs. Garde and Dr. Grayson. Finally, I have learned to be proud of the work I produce and myself.*

Blaine Prudhomme

Avoiding Coronavirus like the Plague

Genetic editing could be the answer
we're looking for

Ebola. Yellow Fever. Swine Flu. Cholera. Smallpox. Polio. Typhoid. COVID-19.

These are but eight out of thousands of diseases that humanity has suffered from in the past two hundred years alone. According to the CDC, infectious diseases are the second highest cause of death worldwide. Unfortunately, the novel coronavirus is one of many to spread fear into the hearts of countless people. Like other types of coronavirus, COVID-19 is a fast-spreading respiratory disease, but unlike many other diseases, it has caused the shutdown of schools, businesses, and travel in nearly every country. In only the four months since its discovery, coronavirus has cancelled graduations, sport seasons, birthdays, weddings, and other life-changing events. Whether or not you are infected, you will be affected.

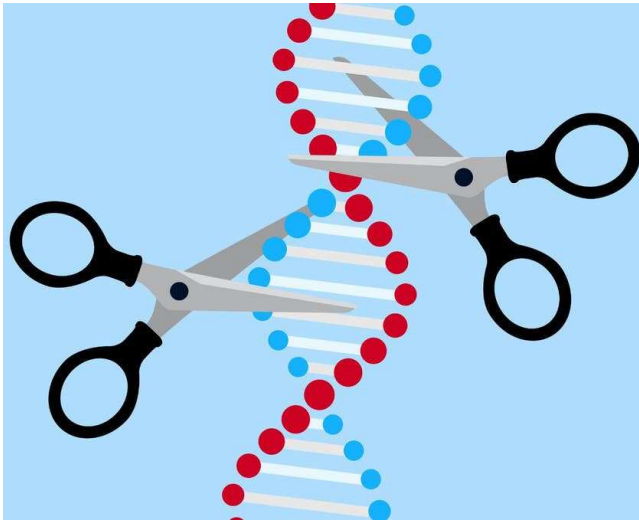
Researchers are left to scramble for a cure, a vaccine, or just a way to slow the spread of the pandemic. But what if there was a way to protect yourself that has already been discovered?

Genetic editing, an extremely recent form of technology that has only recently been tested on humans, is a way to literally change your DNA. If our immune systems could be edited so that we are no longer affected by the coronavirus, this disease would cease to have a hold on us. Genetic editing has progressed rapidly over the past few years, but gene edited immune cells have rarely been used on patients. However, new opportunities in therapy are constantly being discovered, and there are already ways to prevent diseases through the practice of gene editing.

There are two methods for which this can be done.







The first method, gametic editing, is a preventative measure, sort of like a vaccine. This method would make it impossible to be infected, assuming the procedure was successful. Unfortunately, gametic editing means that the reproductive cells are edited, which comes with two inescapable problems. The first is that gametic editing is completed prenatally, which automatically disqualifies anyone currently on this earth from this treatment plan, but at least the future generations would be safe. The second issue is that since the reproductive cells are being edited, the changes can be passed down to children. This may not seem to be a huge issue, but gene editing can result in developmental issues—especially in prenatal editing—as well as other unforeseen problems. These problems can disrupt quality of life and be potentially fatal, which seems like a big risk to take for someone who does not yet have the virus, a guarantee that they will ever get it, or informed consent of the risk they are at, as the procedure would be completed before they are born.

The only example of this method ever being used is a Chinese scientist named He Jiankui, who, in 2018, edited two twins prenatally to prevent them from contracting HIV. This was

done by taking a specific gene called CCR5 and modifying it so that HIV could not enter the cells through that pathway anymore. This method could be modified to prevent coronavirus if we could discover how coronavirus enters cells. The problem is that genes often have more than one function, and we often do not know what they are. In the case of the CCR5 gene, it has recently been discovered that it could affect vulnerability to the West Nile Virus and Influenza, and it may also have a role in development during childhood years. Though these edited twins won't get one particular virus, they may not be able to fight off another, or even grow properly. There is also much debate on whether they should be allowed to have children because of the effect introducing the modified gene into society might have if found to be harmful. Needless to say, this method could have disastrous consequences.

The second method of gene editing may be a better alternative. To prevent a gene edit from passing through generations, it must be a somatic edit, or an edit that affects non-reproductive cells only. This method is done after the patient is already infected. Though it is a treatment instead of a prevention, it may serve as the most effective way to cure people with coronavirus and significantly decrease death rates. This type of somatic editing is done by engineering immune cells. To treat coronavirus, these cells would target a specific protein on the coronavirus's surface and consequently prevent the virus from spreading through the body. This has been successfully done before on cancer patients.

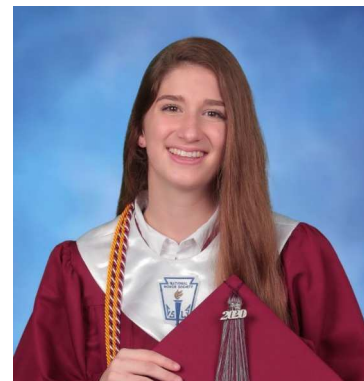
One example of how the immune cell therapy works is a young girl named Layla. She was diagnosed with what was said to be a terminal case of leukemia, and an experimental therapy, including injection of genetically-engineered donor immune cells, was used to fight off the cancer. The immune cells were engineered to kill any cells with a CD19 protein, which is present in the leukemic cells. These immune

cells can be edited to target a specific disease, such as COVID-19.

This immune cell therapy is applied postnatally, and can be used on patients of any age, as opposed to the gametic method, which can only be used prenatally. In addition, the safety risks are significantly lower, though they aren't nonexistent. All forms of gene editing can cause chromosome rearrangement, activate cancer-causing genes, mistake the placement of an edit. All of these risks are potentially lethal. Gene editing comes with risks, and though it is becoming safer to use every day, it still should not be taken lightly. As coronavirus is generally not fatal for healthy people below the age of 50, this therapy would likely only be used in extreme cases when a life is at risk. It is important to note that any immunotherapy using gene editing is experimental. This is not yet something widely available, but the possibility of it becoming a normality may not be far away.

Gene editing, if used properly, could be the answer that we are waiting for. Up until now, a virus couldn't be cured outright. Vaccines may prevent disease in certain cases, and symptoms can be eased through medicine, but editing could stop a virus in its tracks completely. 50,000 people die of infectious diseases every day, and thousands more are being added to the terrifying total in the midst of this pandemic. The world is at an increased risk of pandemics as a result of the increased connectivity in modern society. Diseases may have plagued us for all of time, but the possibilities of immune cell gene therapy may bring their reign to an end.

“ *Though somatic editing is a treatment instead of a prevention, it may serve as the most effective way to cure people with coronavirus and significantly decrease death rates.*



AUTHOR **SAMANTHA VINAL**

Unexpectedly At Risk

On the dangers professional athletes face during the pandemic



Imagine waiting your entire life for a huge event, only to find out that it got cancelled last minute. For many athletes right now, this is what is happening to their high school careers.

Caleb Brandon, senior at Titusville High School, has committed to swim for Indian River State College next year. He says the longest he has ever gone without swimming was three weeks, and even then it took him months to return to the level he was at before the break. However, with the threat of the coronavirus pandemic, swimmers do not have access to a pool, and may potentially not swim again for the foreseeable future. This delay in training will affect performance levels. Brandon predicts that competitive swimmers will lose not just tenths of a second off their best times, but more than a second or two, claiming “A week off is like a month.” For many athletes, the shutdown means a delay in training due to the lack of facilities. But others may still have the ability to train, such as Olympians who box, wrestle, or run, who require only punching bags and the ground to practice.

But perhaps this delay in training may prove to actually be beneficial to athletes during the coronavirus pandemic.

Recent research shows that extreme athletes may experience temporary immunodepression (a higher risk of getting an infection) after physically intense activities. This especially affects Olympians after a boxing match or marathon because their bodies are weaker and unable to fight off infections as well. A study done by several universities across the U.S., including Gatorade’s College of Sport Science and Griffith University, confirmed this, and found that this can happen in almost any intensive training. Extreme sports can weaken the respiratory system, leading to an increase in respiratory tract infections or other viruses.

Though the cancellation of the Tokyo Olympics was a massive disappointment to the athletic world, its one year delay may save thousands of lives—especially those of athletes. One study done by South Ural State University in Russia found that wrestlers and boxers are at a higher risk for infection, and another study found that long distance runners may experience a compromised

respiratory system after a long run. It turns out that athletes—not merely the spectators of the Olympics—are at a high risk of contracting this disease. These certain sports like boxing, wrestling, long distance running, and rowing are all sports in the Olympics, creating a large concern for these athletes’ health. In many cases, COVID-19 can lead to severe respiratory problems, kidney failure or death, meaning those with compromised immune or respiratory systems are at a higher risk for infection. Athletes who specialize in certain sports are not only at risk for injuries, but now potentially death.

Melinda Ring, MD, executive director of Northwestern Medicine’s Osher Center for Integrative Medicine, explains the difficulties of immunocompromised patients: “When the immune system isn’t working at full capacity, it doesn’t have the army of immune cells and mediators ready to mount a defense at the first sign of attack,” says Dr. Ring. “This means infections may progress more rapidly from a mild virus into sepsis, a widespread infection leading to malfunction of the body’s organs.” Though we normally assume immunocompromised patients are those with cancer or other underlying conditions, athletes who push their bodies to the edge may also experience short-term immunity issues.

A study done by Griffith University compared elite rowers with people who don’t work out in order to discover the effects that exercise has on salivary proteins, which help fight off infections. The conductor of the study, Dr. Nic West, stated, “Theoretically, exercise is a stress on the body and leads to a greater susceptibility to illness. The decrease in salivary proteins, one of the body’s first lines of defense against infection, may help explain this.” He is hopeful to find more positive results through further research, and believes that the rowers’ bodies should be fighting off infection better than sedentary people. This seems to be the common belief, and most would argue that athletes are safer. However, in the case of COVID-19, what matters is that everyone’s immune system is as healthy as can be. Even with athletic events that are as important as the Olympics, safety always comes first in sports. If continuing intensive training can cause susceptibility to infections, athletes should

minimize their practice until this virus is more controlled.

This unexpectedly at-risk group may be unaware of its own vulnerability. Another study done by the Gatorade Sports Science Institute sought the same information, but with slightly different results. To determine if the immune systems of athletes and non-athletes are different, they studied for several years the relation to strenuous exercise and trauma to the immune system. To begin the study, they asked 2,700 high school and college coaches if they believed overtraining can make athletes sick, and 89% answered yes. However, when they asked athletes themselves, 90% answered no. At first, they were unable to determine any differences in risk besides slight salivary differences. They then discovered that immunity is normal in the weeks following an intense athletic event, but not in the short term. In the days directly after a race or match, immunosuppression is increased, and they found that while nutrition can help, prolonged intensive exercises do increase the likelihood of infection and upper respiratory tract infection.

With the world in lockdown, it's easy to get selfish and believe that the rules don't apply to unique individuals. For athletes, this could mean going out and practicing. But suspending sporting competitions is saving countless lives of not only the fans, but also the athletes. No sport is more important than people's lives, and continuing to train intensely at the expense of the immune system is a pointless risk during a pandemic. With the rapid uncontrollable spread of the new coronavirus, is getting in a few more minutes of practice actually worth it?

“ *Though we normally assume immunocompromised patients are those with cancer or other underlying conditions, athletes who push their bodies to the edge may also experience short-term immunity issues.*



AUTHOR SPENCER OWEN

Taking a Detour

How COVID-19 is transforming the autonomous vehicle market



Wuhan, the origin of COVID-19, is home to many automotive manufacturing plants, including those of General Motors and Honda, and makes up 10% of China's car-making capacity.

As COVID-19 began to spread, the Chinese government declared a nationwide shutdown, which directly impacted the factories in Wuhan. Previously noted for having the most prominent automotive market in the world, car sales in China fell 92% in the first half of February. Fortunately, throughout the past couple of months, the situation in China has been slowly getting better. According to information from the China Association of Automotive Manufacturers, more than 90 percent of automotive parts suppliers in China had resumed production by the last week of February.

With over 3 million confirmed cases and at least 200,000 deaths worldwide, the coronavirus pandemic has quickly become the most impactful global epidemics of the twenty-first century. From self-quarantining to mask-wearing to social distancing, most lives have been drastically transformed, with many yearning the return to reality.

As a result of this deadly virus, many industries are struggling to sell their products and remain afloat. Most notably, the automotive industry, which is one of the more substantial contributors to the economy, has seen its worst fiscal March in decades as it struggles to cope with the impact of the pandemic. This is most

likely because people are hesitant to purchase a vehicle and are worried that it could severely disrupt them financially. With the suggestion to self-quarantine due to the virus, major automotive companies have switched to more online-focused shopping methods and using tools such as augmented and virtual reality to enhance the experience.

China's nationwide shutdown has sent a shockwave through the automotive industry far beyond China's borders. In the ensuing months, product shortages from China have stalled production around the world.

Despite all of these disruptive setbacks, automotive manufacturers and other industries have driven on with fighting spirit. As hospitals and other medical facilities continue to fight the coronavirus on the frontlines, equipment shortages have left many medical professionals working with inferior protective gear. In response, companies such as Ford and 3M have formed a joint coalition to repurpose existing parts into powered air-purifying respirators (PAPRs). Using fans from their vehicles' cooled seating system and 3M's HEPA air filters, the device can supply air for up to eight hours. The PAPRs device also includes a hood and face mask to protect the health care worker's head and shoulders. Additionally, Ford is working with General Electric to build ventilators and aims to produce 50,000 of the systems by July 4th.

However, the automotive industry might provide an even greater service: autonomous

vehicles. In response to the ongoing pandemic, several autonomous vehicle manufacturers across the globe have applied their autonomous technologies in situations that social distancing has otherwise made difficult. In China, a delivery startup called Neolix has taken to the streets with their fully autonomous delivery vans. The autonomous vans have delivered medical supplies and supported labor shortages in areas hit hardest by the virus outbreak. They have also provided food to health workers. But that's not all, as these little helpers can even serve as cleaners to disinfect the streets. The company has increased its production to deploy even more units onto the roads and maximize its efforts. To help further support their initiative, several local Chinese governments have reduced the price of the vehicles to boost their effectiveness. As a result, Neolix plans to deliver 1,000 vans this year.

On the other side of the globe, autonomous vehicles are showing even further utility in the medical field. For the first time in the United States, autonomous vehicles are transporting medical supplies and COVID-19 tests at a Mayo Clinic in Jacksonville, Florida. In collaboration with the clinic, the Jacksonville Transportation Authority has contracted the autonomous vehicle service provider, Beep, and French autonomous shuttle manufacturer NAVYA, to carry out the operation. The operation is currently using four of these autonomous vehicles to run the test samples from a drive-through testing site to a disease processing facility at the Mayo Clinic facility. By using the NAVYA autonomous shuttles, workers have been loading coronavirus test materials into the vehicles, essentially removing an additional human from the potential infection chain—not to mention freeing up valuable hospital staff.

These efforts made by autonomous vehicle manufacturers to make the most of their technology during the pandemic are revolutionary, but not all have taken this approach. At the cusp of the self-quarantine movement, The Verge interviewed multiple autonomous vehicle companies in the United States to get insight into their plans. Adhering to the advice of Health experts, most United States autonomous vehicle manufacturers have halted all on-road testing. Fortunately, the temporary shutdown won't affect the majority of the development process for autonomous vehicles, since most manufacturers can continue testing through simulations during the quarantine.

Despite having a backup plan through

simulated development, this decision has exposed how technology designed to be human-independent still largely relies on a workforce of multiple facets. For most companies developing this autonomous technology on the road, they require the presence of a safety driver to monitor the status of the vehicle and the surrounding environment, but there's a catch. A vast majority of the companies that build and test these autonomous vehicles do not actually employ their test drivers. Instead, these companies use staffing agencies to find people willing to observe these vehicles, creating a legal gap between the companies and their drivers. Many of these companies have plans to pay their drivers during this suspension. However, some of them are worried about their job security in the long term, which is quite ironic for a technology meant to make their jobs obsolete.

This is not the first time a pandemic has affected society in such a damaging way. Just over a century ago, as World War One was entering its final year in 1918, a new strain of flu arrived with very few people having immunity. Throughout the next two years, this flu racked up an estimated 500 million cases worldwide, or one-third of the world population, and led to 50 million deaths, making it the most severe pandemic in recent history.

Besides health repercussions, the Spanish flu produced a somewhat disrupting impact on the economy. The immediate economic consequences stemmed from general panic and resulted in labor shortages, wage increases, as well as the increased use of social security systems. The United States' major cities, such as New York and Philadelphia, were temporarily shut down because so many employees were sick. Similar to the current pandemic, most businesses, sporting events, and many private events were either closed or canceled. However, this downturn was short-lived, and society was able to recover reasonably efficiently. Researchers from the MIT Sloan School of Management concluded that cities that implemented policies like social distancing did not suffer any unfavorable economic effects. On the other hand, cities that intervened even earlier and more aggressively underwent a relative rise in economic activity. Sadly, any accurate economic statistics are undetermined due to its effects becoming disentangled with the first world war.

Just as the Spanish flu affected the economy, COVID-19 is making its mark. As of February 19, 2020, the stock market began experiencing a

massive crash with significant indexes such as the Dow Jones, S&P 500, and Nasdaq dropping almost fifty percent over the next thirty days. Though the market has been in recovery since March 23rd, more than 5.2 million Americans filed unemployment claims.

Although it might be improbable to see autonomous vehicles go mainstream in the immediate future, COVID-19 has illustrated how the world could greatly benefit from this developing technology, especially during times of uncertainty. The applications of autonomous vehicles during the current epidemic may have been minimal, but it is only beginning. In reality, the coronavirus pandemic has been a test for this technology to see how well it can respond in the future. With the likelihood of another widespread epidemic, autonomous vehicles could be crucial in reducing its spread. In future pandemics, autonomous vehicles will likely continue to provide sanitation and useful means of transportation for healthcare facilities, grocery stores, and pharmacies at a more efficient rate.

As one of the most advantageous applications for autonomous vehicles, transportation could become a scarce commodity during pandemics. In situations where delivery workers and drivers show up to work sick and cause companies to struggle to fulfill their demand, autonomous vehicles are a reliable option in supplementing labor and supply chain shortages. By incorporating autonomous vehicles into their operation, companies could significantly boost their production and still run efficiently during times of economic struggle.

In addition to serving as a mode of transportation, autonomous vehicles can play an even more vital role in the medical sector. Because traveling in an autonomous vehicle has shown to help reduce the risk of disease transmission, the next possible evolution for these vehicles is to develop solutions for monitoring vitals and recognizing contaminants from ill passengers. This new design of autonomous vehicles could serve as a method of healthcare centers that hospitals could send out to patients. Israel-based startup Vayyar has explored this idea by developing technology that enables passenger breathing monitoring, vital sign recording, and many other features. Additionally, in pandemics where preventing airborne spread is of the most pressing concern, a concept of this caliber could prove extremely valuable, as it could drastically limit the amount of human contact in a healthcare environment.

“ By incorporating autonomous vehicles into their operation, companies could significantly boost their production and still run efficiently during times of economic struggle.

With the current and possible capabilities of autonomous vehicles, the industry will likely become an essential business the next time a pandemic ensues. The ongoing events of COVID-19 have abruptly brought the world to a standstill. To prevent any additional spread of the virus, most governments have mandated all businesses not considered “essential” to cease their operations. Although there isn’t a consistent definition, most states classify businesses essential if they provide groceries, health or financial support, or utilities. It is quite apparent that autonomous vehicles have proven that they can provide services in each sector, excluding that of financial support. While social distancing and self-quarantine have left most of us incapable of living a normal life, autonomous vehicles could help lessen that gap.

Autonomous Vehicles have demonstrated how truly beneficial they are when maintaining health is the top priority across the globe. But when things eventually return to normalcy, what does the road ahead look like for autonomous vehicles? Because most manufacturers have halted their development, it is unlikely to see any large-scale deployment in the short term. However, once development begins to pick back up, progress and interest in autonomous vehicles could see a significant boost, all thanks to COVID-19.



AUTHOR HARRISON BERUBE

Automation During COVID-19: A Peek at the Future

The Covid-19 pandemic has devastated the world over the past two months. The government has mandated a unique quarantine to slow the spread of the virus. However, the quarantine has flustered the entire economy down to every last business. The economy has been suppressed and is currently suffering the consequences. The stock market has dropped to record lows. In fact, the DOW, a measure of the stock market's performance, experienced an unprecedented drop, falling from 29551.42 on February 12th to 18591.93 points on March 23rd. Businesses are struggling to stay on their feet and pay their employees, while others have shut down or gone bankrupt. However, there has never been a better time for a small percentage of businesses than now--especially businesses that specialize in automation, who are seeing record level sales and interest in their products.

As a result of the interest in automation, companies are attempting to implement automation at a quicker rate for safety and customer satisfaction. For example, the recycling industry was already struggling before the pandemic, but now the industry has been completely shut down out of fear that workers might contract the virus. However, the American company AMP Robotics has the answer: their automated robots are designed to sift through recycled material, separating out the trash, so that people never have to get their hands dirty. Before the pandemic, some recycling facilities were saying that they were thinking about buying one or two of the robots, but now they are looking at quite a few more for the sake of their employees.

Similar to AMP Robotics, many other companies that specialize in automation are experiencing the same increase in demand for their products. Software companies, such as Brain Corp, are experiencing a similar rise in product interest and sales. Brain Corp, who specializes in software used in automated floor cleaners, stated that retailers were using the cleaners 13% more than they were just two months ago. Furthermore, Brain Corp calculated that the automated floor cleaners perform about 8,000 hours of work a day that otherwise would have been done by employees.

Retailers are beginning to notice how beneficial automation is in tending to their stores.

The supermarket Giant Eagle, for instance, says that robots are allowing their employees to focus on other tasks rather than sanitizing surfaces, processing deliveries, and taking inventory to keep shelves stocked. Giant Eagle and other retailers are using robots to enhance the work and safety of the employees.

Likewise, the role of the cashier is changing through the implementation of self-checkout kiosks. The self-checkout kiosk has been a recent alternative to a cashier, though sometimes a trouble to navigate, leading to the intervention of a worker. However, now the self-checkout kiosk seems to be the more viable option, replacing human contact for a safer checkout experience. Even further, automation like Amazon Go seems to be less like a dream and now more of a need for society.

Automation is one of the key factors holding the economy together right now, and without it, the world would be struggling even more. But not only is automation aiding the world, all of technology is.

Currently almost all communication is through technology, whether it be email, video, audio, etc.. Virtual classrooms and video chats/streams have also saved the day. The pandemic has forced all schools, colleges, and universities to shutdown to keep everyone safe and socially distant. Furthermore, the pandemic's stay-at-home policy has forced students to attend school and learn virtually. Software, such as Google Classroom and Zoom, are both used for communication between the student and teacher to aid the learning experience. Google Classroom is a virtual classroom where students and teachers can communicate through messages and assignments can be posted and graded. On the other hand, Zoom is a live video chat software where teachers can present lectures and have face to face interaction with students. Teachers and students are able to stay safe from the virus in the comfort of their own home while still having all the resources they need to further their education. Without technology like Google Classroom and Zoom, education would be practically impossible.

As well as communication and education, most shopping is having to be done online, otherwise known as ecommerce, which is currently thriving. People are stuck at home being forced to order goods online due to business closures, or a general lack of goods. Only essential

stores remain open, of which many lack everyday household goods. Many people are beginning to use online shopping as the safest and easiest way to acquire goods during this quarantine. People are realizing how easy and reliable online businesses are. Almost everything a customer can find in person at stores is also in stock on the internet. These online businesses have warehouses ready to ship whatever goods one needs to their doorstep. For instance, Amazon, already the largest internet company, is thriving and gaining customers. Amazon's sales are increasing because shoppers intend to stay at home rather than visit frequent brick-and-mortar businesses. Technology is demonstrating



its potential during times of crisis and how beneficial it truly is.

However, some of the brick-and-mortar businesses, such as HEB, still remain superior in retail sales. HEB is one of the largest grocers in the United States and remains there because of its recent addition to the company: Curbside. HEB Curbside is a system, familiar to many, that lets the customer order their groceries online and then pick them up whenever they need to. The system allows the customer to never have to step foot outside their car; they simply drive up and drive off with their goods. Curbside is currently getting the most service it has ever had because of the pandemic. HEB and the other stores that remain open have to enforce rules and only allow a regulated number of customers in at a time, leaving Curbside as the easier and safer option. However, people are learning that programs, such as HEB Curbside, are not only ideal during crises, but helpful for quick shopping all the time.

The world is currently seeing a glimpse of what the future of technology holds. Before the pandemic, people thought that the world may be implementing and relying on automation and technology too much. However, now people have to rely on automation and technology to keep the economy standing. The times have changed and now people are thinking about what needs to be automated next. As time goes by, automation will only improve, until one day it will be present in every aspect of life. This pandemic is not the first and will not be the last one to plague the world. All of technology, including automation, will continue to aid the world more and more. Technology never sleeps.

“ Automation is one of the key factors holding the economy together right now, and without it, the world would be struggling even more.



AUTHOR BLAINE PRUDHOMME

Another Underlying Condition

The pandemic is revealing a dire nursing shortage in the United States



Danielle DiCenso, a nurse for Palmetto General Hospital, tested positive for the coronavirus and passed away just a few days later. Her husband, David DiCenso, raised concerns about her death, saying she was most likely exposed to the coronavirus while working. This particular hospital lacked the right medical equipment for their healthcare workers, and Mr. DiCenso says this was the reason Danielle was infected. While recounting the story of Danielle's last few days to NBC Miami, he stated, "I know for a fact that my wife would still be here right now if she was given the proper protective equipment." Mr. DiCenso is struggling immensely with his wife's death, especially because Danielle never got to say goodbye to their 4-year-old son.

DiCenso and millions of other people in the world have the same concern: healthcare workers are not being properly protected from COVID-19. Nurses and doctors are working around the clock to try to save thousands of lives infected with the coronavirus, but their rate of infection may continue to rise without the proper equipment. Danielle DiCenso was just one case out of hundreds of healthcare workers who put their lives at risk only to end up infected themselves.

The physical and emotional exhaustion these healthcare workers have had to endure because of the coronavirus is a symptom of a larger problem: the already existing nursing shortage. This current nursing shortage has been a dilemma for the last 15 years and has heavily affected the nursing field. With the millions of elderly nurses retiring and young women steering clear from pursuing a career in the nursing field, thousands of jobs are left available with no one to fill them. It has created an environment in which nurses are burnt out, hospitals are in debt, and nursing schools are rejecting applicants. Adding the pandemic on top of all of this has made it harder for the government, hospitals, and nursing schools to come up with solutions.

In Pittsfield, Massachusetts, 160 employees of Berkshire Medical Center have been quarantined at home after exposure to patients who tested positive to COVID-19. To prevent this and what is

happening to workers like Danielle DiCenso, hospitals have taken many precautions to try to keep their workers safe from COVID-19. At Pesaro's San Salvatore hospital, doctors and nurses must be fully covered in protective equipment during their almost 12 hour shifts, which they cannot remove for even so much as "a glass of water or a bathroom break." While this is a great thing hospitals are doing, it has resulted in hospitals switching certain areas where they previously placed their money. Before, hospitals were using funds on recruiting and retaining nurses in response to the nursing shortage; now, the coronavirus pandemic has led them to spend those thousands of dollars on equipment.

On top of all the COVID-19 patients, nurses and doctors still have to deal with their regular patients as well, such as pregnant women, children with the flu, and cancer patients. With all this in mind, there are simply just not enough nurses to handle the hundreds of patients hospitals receive in a day.

The emotional pain and mental exhaustion healthcare workers have faced can be alleviated, however. On March 21, Texas Governor Greg Abbott decided to waive several regulations for nursing students' clinical rotation requirements so he could meet his state's needs during this pandemic. Specifically, he allowed senior nursing students and retired nurses to receive a temporary permit that would allow them to practice. Ralph Northman, the Governor of Virginia, has also ordered state regulatory boards to waive nursing education requirements in an executive order. Many states have been inspired to do the same. However, there is one state that has been publicly hesitant to do so, and that is California. California Governor, Gavin Newsom, announced on March 30, that there would be some steps toward "putting untapped medical expertise to work." However, his announcement was very vague, and he did not mention what kind of steps and how fast they would be made.

California's main reason for not acting as fast as Texas and Virginia is because they do not want to risk exposing nursing students to this disease. But because the shortage already existed,

students are still very needed to work in hospitals even if they are not working with COVID-19 patients. Just because many patients are infected by coronavirus, the usual patients who go to hospitals for diabetes, lung disease, pregnancy, and cancer still exist, and those people need care as well, which nursing students could provide. Another reason why these students need to be able to help out is because they still need clinical hours. Clinical hours are a requirement for students graduating nursing and medical school, so if they do not have these hours they will not be able to graduate on time and will have to wait up to another year to do so. With the current situation, restricting students who are willing to work in these hospitals is only hurting us.

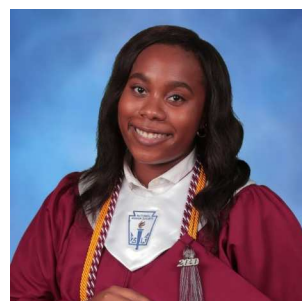
Greg Abbott's allowance for non-certified nurses shows that there is a pre-existing issue in the nursing field: the nursing shortage. The shortage of nurses existed long before the coronavirus, and Abbott's order is merely a bandaid. There are, however, long term solutions the government, hospitals, and nursing programs could make to alleviate this shortage. Two major solutions that can be done are expanding nursing and hospital facilities and improving the education of nursing schools. The lack of nurses in hospitals has either caused hospitals to be in debt or have low funds, which can cause them to have a lack of equipment in times such as the coronavirus pandemic. Nursing programs fail to have enough nurse educators to train their students, which heavily plays a part in the amount of students able to join a school. There are also several aspects of nursing, such as empathy training, that some nursing schools fail to cover properly, which can later lead future nurses to have feelings of burnout. By focusing on implementing these solutions, Abbott and several other governors would not be in the position they are currently in now: asking inexperienced nursing students to jump into the workforce too early.

The coronavirus pandemic is revealing multiple weaknesses in our societal structure, and one of these that is coming quickly to the forefront is the nursing shortage. While this has been a problem for over the last two decades, if the government was able to give more attention to the nursing shortage, we would not be in as deep a hole as we

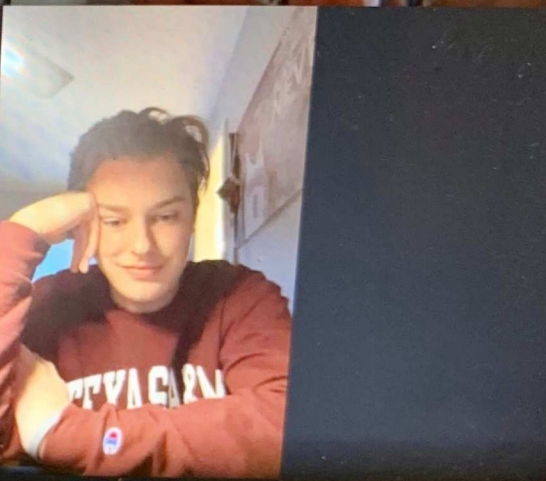
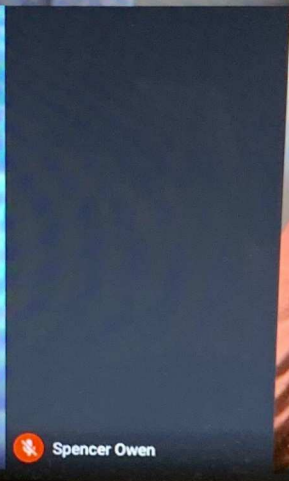
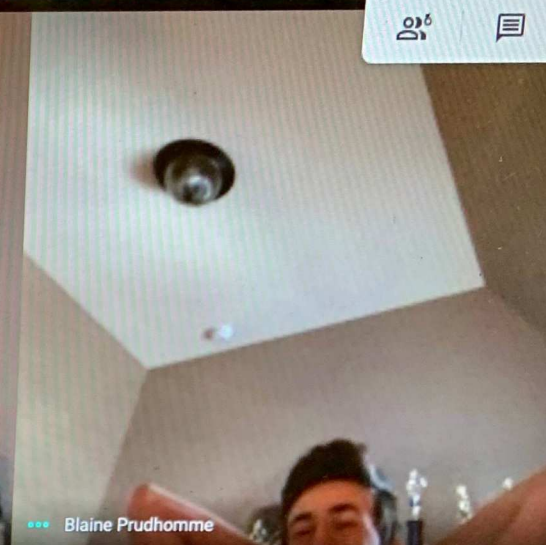
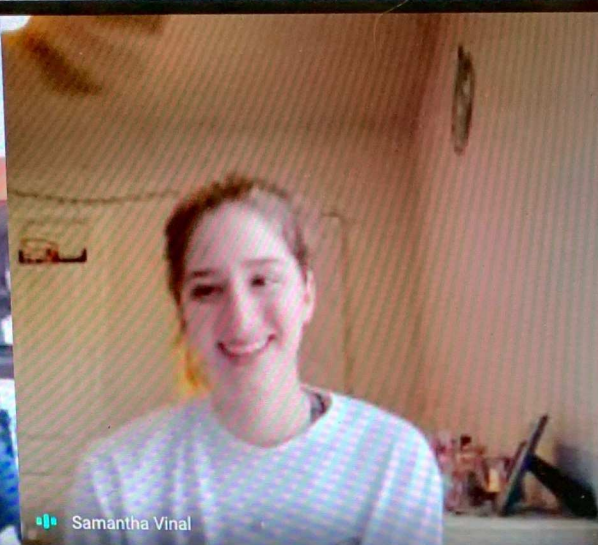
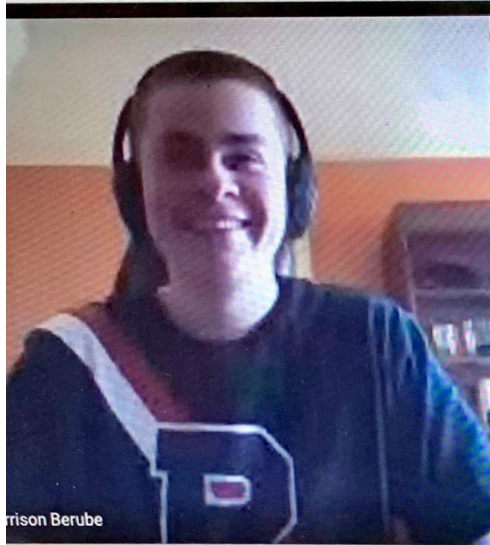
are today. Even though the COVID-19 situation will eventually pass, the nursing shortage problem will not. We need to start treating the nursing shortage like the crisis it is, to not only help our generation and the care we receive, but future generations as well.

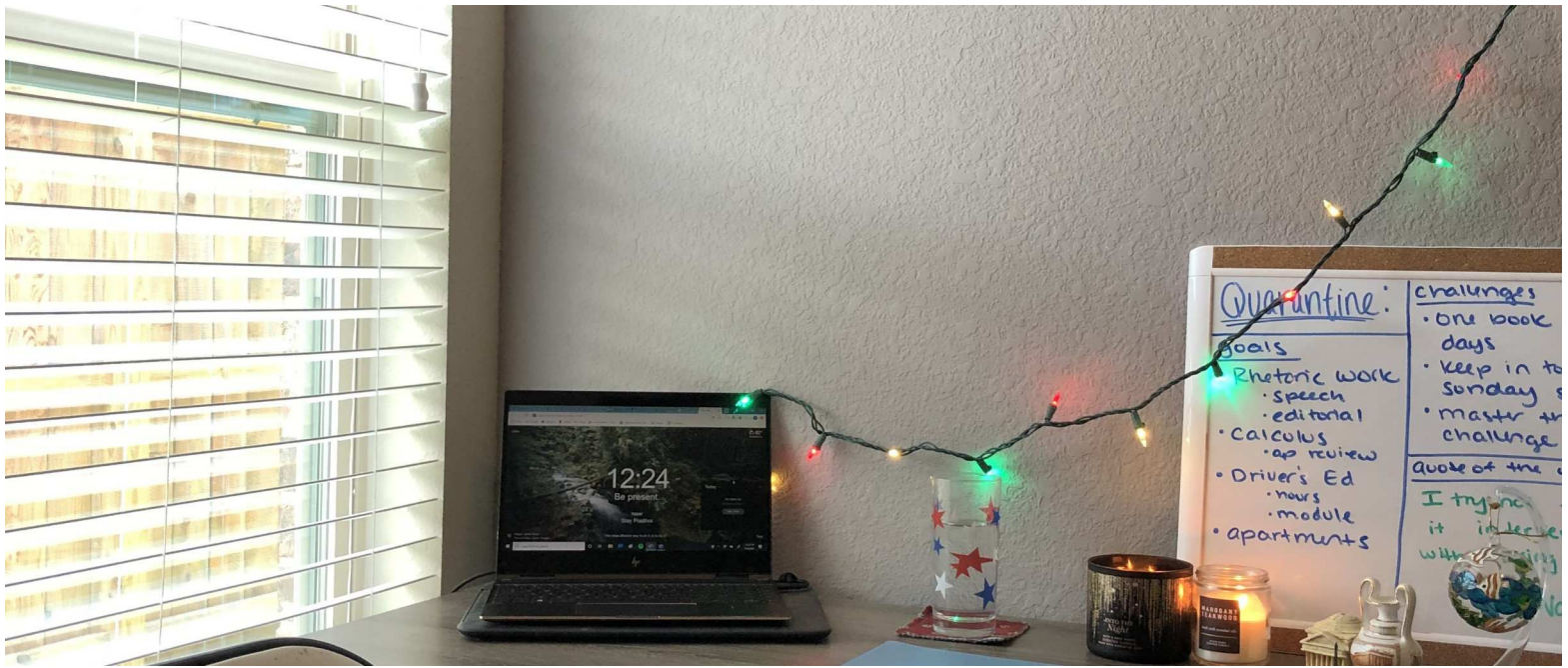


By focusing on implementing these solutions, Abbott and several other governors would not be in the position they are currently in now: asking inexperienced nursing students to jump into the workforce too early.



AUTHOR DIONNI THOMPSON





“ *I know looking back I'll appreciate the one on one time most where I could sit down with the teacher and just have a conversation about what I needed to do. I'll definitely miss the TED Talks with Adam Driver too, but most of all I'll miss our walks to Starbucks just to get a breather and take a step back to reflect on our papers as a whole.*

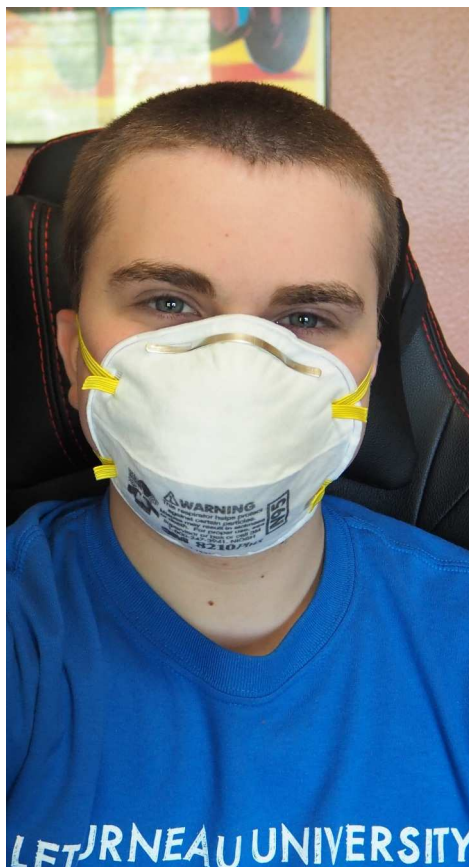
Spencer Owen

“ *Rhetoric class has given me the ability to write and articulate well. As someone going into a science field, I believe that effective research will be extremely important for me. In addition, the skills I have learned in this class to clearly and concisely make a point and answer questions will take me far.*

Samantha Vinal

“ *Having the opportunity to research a topic that I am genuinely passionate about made Rhetoric a gratifying experience. During coronavirus quarantine, I have learned how important it is to have a strong community, especially in a learning environment.*

Harrison Berube







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