

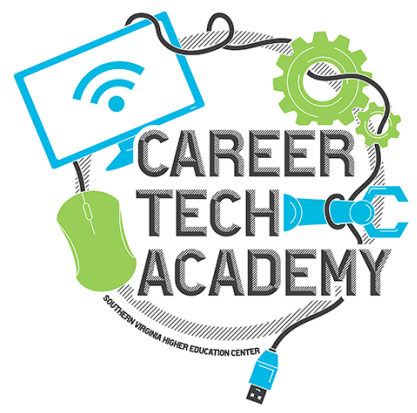


# SOUTHERN VIRGINIA HIGHER EDUCATION CENTER



Your Opportunity Lives Here

November 2021  
Volume 1, Issue 4



## Honoring Our Veterans





Charles Clayton  
CTA Instructor



Brent Duffer  
HVAC Lab Tech



Katrina Powell  
SVHEF Exec. Director

Join us in saluting  
our SVHEC &  
SVHEF Staff  
Veterans

Veteran's Day may have passed but we will never forget our vets. Southern Virginia Higher Education Center has Charles Clayton, former marine and now teacher of Industrial Technology, Brent

Duffer, part time HVAC instructor, and Katrina Powell who served in the United States Army for twenty years in both Active Duty and Active Reserves and is now the Director of the Southern Virginia Higher Education Center Foundation. From the bottom off our hearts we thank these USA veterans for their service to our country and for continuing to use their skills and knowledge to make our community a better place.

## CTA Alumni Wins at Speedway

Jared Dawson had no idea he would win Rookie of the Year honors in South Boston Speedway's Budweiser Pure Stock Division. Dawson originally planned to continue to compete in the Budweiser Hornets Division and add a sprinkling of races in the Budweiser Pure Stock Division into the mix.



Plans changed quickly for Dawson. Right after the season began, he decided to regularly compete in the Budweiser Pure Stock Division as well – a choice that led to him earning Rookie of the Year honors in the Budweiser Pure Stock Division.

"We were just planning on bringing the Pure Stock car every other race," Dawson explained. "As the season started, we saw I could compete with

the guys in Pure Stock, and we started bringing our Pure Stock car every race. It proved to be a real good decision."

Dawson says winning the Rookie of the Year title in the Budweiser Pure Stock Division is a big accomplishment.

"It's a great honor," Dawson said. "Racing in the Pure Stock Division was the best racing I've ever done. It's real

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### Special calendar dates

- 12/23—Christmas holiday begins
- 12/25—Christmas Day
- 1/3—Return to class



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## Adam's Automation—Adam Reeves

As the year ends, it is a good time to reflect on the challenges we've overcome and to look ahead to future opportunities. Students in Automation Robotics began the year working through the basics of electricity – gaining a foundational understanding of the forces that power almost all of modern industry (and society). Building on this knowledge, they have designed and tested circuits that combine buttons, control relays, and timer relays to control lamps, solenoids, and motors to perform certain functions. Students have gained knowledge on the path that industry has taken to get to where it is today—beginning with the Industrial Revolution. They have mastered the basics of operating the FANUC robotic arms and have begun to program the robots to complete simple tasks.

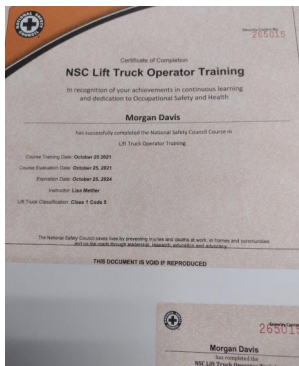
While it seems they have learned so much already, in reality it is only the beginning. In the semester to come, the students will get experience in troubleshooting control circuits. As we begin to use programmable logic controllers (PLCs), they will be able to design much more complex control circuits. Students will also take their programs for the FANUC arms to the next level, programming more and more advanced actions. Ultimately, they will use simulation software to create entire work cells with multiple robotic arms, conveyors, and turntables with everything functioning in coordination. It is an exciting time for me, knowing what knowledge and skills await the students. We should also maintain a perspective on the long-term



opportunities the students in the Automation Robotics program are working towards. Currently, about 1/3 of workplace tasks are performed by machines. The World Economic Forum predicts that by 2025, over half of workplace tasks will be done by machines. This will create new opportunities as these workplaces will now need trained technical workers that are able to program, manage, and maintain the robots. The skills that students in Automation Robotics are gaining will give them the ability to work with the growing presence of robots in the workplace.

## Students Forklift Certified

Students in the Work Based Learning class received their forklift certification, a valuable tool in their career success.



Students from Year 1 Welding, Information Technology, and Industrial Technology

received their certs from the Safety and Health Council of North Carolina.

The process included classroom instruction and a driving test. During the class, safety is a key component which also verifies what they have been learning in their OSHA certifi-

cation class.

The most common forklift injuries/accidents are:

- **Overtaken Forklift:** Occurs when a lift tips over and crushes the operator and/or bystanders
- **Worker or Bystander Hit by a Forklift:** Occurs when a lift operator inadvertently strikes a coworker or bystander

**Fall:** Occurs when a lift operator falls from the truck. Proper forklift safety training can limit the risk of lift accidents and associated injuries.

Students will now be able to operate indoor forklifts, or lift trucks as they are now called, for three years, at which time they are eligible for recertification. If they need to be certified for outdoor forklifts, they will need another training program. Or, if they have an accident, they must go through training again.

IT student Braiden asked why he needed forklift certification for his field of computers.

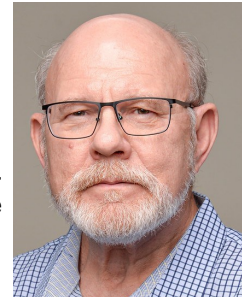
Lift trucks are used in many industries and businesses. IT may need a lift truck to physically get to servers or routers that are high up in rooms or buildings and need maintenance or troubleshooting.

Jeremy Newton, IT Specialist for SVHEC, says, “forklifts are good to have because you can lift heavy server racks and equipment in general” he continued, “some equipment needs to be maneuvered around by lift trucks.”

Geoff Vaughan, Welding program lead says, “forklifts are helpful for moving heavy equipment like welders and pallets of metal coupons. Having students with certification is nice for those students who want to use it in the future which may be required.”

Braiden asked a great question that allowed us to highlight the importance of having diversified skills to make one more competitive in the job market.

## Energy: The New Frontier—Charles Clayton



Adventures in Industrial Technology with a Focus on Energy this month were centered on mechanical energies and concepts. The energy distributed for use in homes and industry is Alternating Current electricity. The greatest source of Alternating Current electricity is electric generators that contain a rotating magnetic field. The mechanical force used to produce the rotation can be gas turbines, steam turbines, wind, or flowing water. Regardless of the drive systems used the same mechanical principles come into play. A shaft is always at the center of the rotation and that shaft must be constrained

to the expected path of rotation using bearings. The bearings must limit the travel of the shaft in the desired direction without restricting the desired rotation. The simplest form of bearing, the plain bearing, consists of a shaft rotating in a hole. Lubrication is used to reduce friction. Plain bearings can last decades without failure as the shaft is flooded on the lubrication and there is no metal-to-metal contact. Our class had the opportunity to mount various types of bearings and shafts. We build various drive systems to include belt drives, chain drives and gear drives. The class liked the simplicity of the belt drive

system and could appreciate the cost effectiveness. The chain drive system operated on the same principle and can handle more torque to do more word. However, the lubrication maintenance and the added noise of the chain system makes it less cost effective. The class found the gear drive system to be the most difficult to configure and build. The precision of the mounting and the criticality of the gear spacing makes the installation challenging. The class really enjoyed learning about mechanical systems.

## Welding in the Workforce—Chris Walker



My welding class has now begun stick welding. We have completed Welding 1 modules 29100 through 29106. Everyone is sincerely enjoying learning how to weld. That is why they signed up for this class in the first place, therefore they are excited to have all of the necessary completions to actually start welding. This gives them a feel for what will be

expected on the job site. After stick welding we will

will move into MIG welding. We will be applying what we are learning now to the rocket stove through our Project Based Learning program. The hands-on training provides the real experience students need to fulfill their expectations for taking this course. That is where they will get the knowledge they need to actually pass a welding test and get a great paying job. They are also looking forward to building their rocket stove once they learn how to do the hands-on cutting, grinding, and welding. Once completed, students will be able take their rocket stoves home and have a daily reminder of the skills they've learned. After completing this class, students will be able to get a job anywhere in the country if they so desire, or they will have some college credits they can transfer to a college of their choosing. We are off to a good start and we really look forward for what is yet to come.

## Contact Information

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## WEBSITES

**Mecklenburg County Public Schools**  
mcpsweb.org

**Halifax County Schools**  
www.halifax.k12.va.us

**Charlotte County Schools**  
ccpsk12.org

**SVHEC Career Tech Academy**  
www.svhec.org/cta





### Tri-County Food Drive

Tri-County Community Action Agency is collecting food donations for the holidays along with their regular food drive.

You can bring any foods, canned goods, dry goods etc. as long as its' unopened and not expired. The address to bring food is 1011 South of Dan School Road in Cluster Springs.

Hours are 1st Mon-days from 9:30am —10:30 am and 2nd Mondays from 11:00 am—1:00 pm.

### Who is Tri-County Community Action Agency?

We are a non-profit 501(c)(3) organization dedicated to making a positive difference in the lives of individuals and families who are experiencing the effects of poverty. TCCAA has administered federal, state and local programs for over 50 years in Halifax County, VA. In October of 1965, the organization was chartered to assist in a nationwide effort, deemed necessary by the Economic Opportunity Act of 1964, to fight against poverty in the United States.

Since then, the agency not only serves Halifax County, but has expanded to serve those in surrounding areas of Southside Virginia to include Mecklenburg and Charlotte Counties. We have been committed to using collaborative efforts with other community partners to identify community needs and to improve the lives of others. The agency consists of an array of services and programs that are built to empower the clients we serve through wrap-around program case management, education and support.



### Online Shopping Safety Tips from the VITA

The holiday season brings with it some of the best activities of the year. Spending time with friends and family, joining in on generations of traditions, eating wonderful food, and giving gifts. With many of these activities comes the thrilling endeavor of Online Shopping. It's easy to get carried away while shopping and sharing time with friends and family so, while you are feeling the love this season, remember to protect your personal information and online activity.

To help you manage your online safety, here are some tips from the Virginia Information Technology Agency (VITA).

- Do not use public wi-fi for online shopping activity.

When entering personal information like passwords and account

## Tech Talk— Daniel Shaughnessy

numbers only use a secure and trusted network. Public networks are very hard to secure and it is best if you avoid them all together.

- Make sure online shopping websites are legitimate and secure.

Look for the 'lock' and the 'https' in the URL bar to know that a site is certified and encrypted. This goes for the sellers and their products on sites like Ebay and Amazon as well. Look at the number and quality of the reviews of each seller.

- Use Credit cards and 3rd party payment options.

Credit cards and 3rd party banking sites like PayPal give an extra layer of security to your bank account. Fraudulent credit transactions are easier to dispute because the money hasn't left your debit account yet.

For more information on online shopping safety and holiday cybersecurity please check out the Virginia Information Technology Agency website ([www.vita.virginia.gov](http://www.vita.virginia.gov)).

And, please have a safe and Happy Holiday season.



# alumni news

Ethan (pictured right) is a former Career Tech Academy student whose first year program was Mechatronics (now called Industrial Technology). He is currently attending Old Dominion University full time in a four year program. His major is mechanical engineering. When Ethan graduates he will be interested in aerospace or research and development of mechanics or robotics. His father states, "He's doing real well, his grades are there."



He interned at Oval Machining in South Boston during his Work Based Learning class at CTA and continued on through summer until college. He still maintains contact with them and has expressed his gratitude to Josh Garber and crew for taking him in like family. He really enjoyed his time there and felt it prepared him for the engineering side of a career.

"The Career Tech Academy prepared him for a career and helped him with understanding the workforce," states his father.

Ethan has joined the ODU baja cart team and builds suspension from the ground up.

Levi (pictured right) was a student in the CTA Information Technology program. He joined the army after graduation and received an ROTC scholarship. He is on track with the army reserves.



Levi was able to choose from multiple junior colleges and decided on Georgia Military College in Milledgeville, GA and is in the process of contracting with the army.

After two years at college, he will graduate as a fully commissioned officer with the Army Reserves. Then Levi will be paid to finish his degree at a four-year university. He will be able to choose from any university with an ROTC program that accepts him.

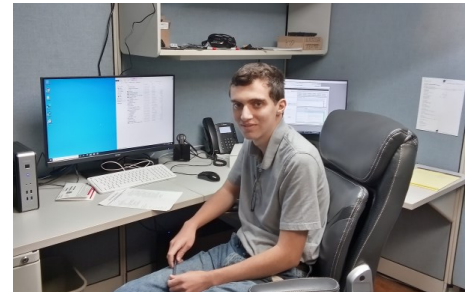
Levi will pursue IT although it is too early for him to choose specifics. He has three options after he receives his four-year degree. He could go into the army full time, he could go into the Reserves with a civilian job, or he could join the National Guard Reserves in IT.

Mom Jody says Levi adjusted well to Army life and boot camp, "It's not warm and fuzzy, but a cold and disciplined lifestyle. He still loves it and there is a lot of comradery." she says.

She goes on to state that, "I think it was extraordinarily helpful (for Levi to attend the Career Tech Academy) and I think it made the difference for him to pursue an area in technology that he is excited and interested in, This experience filled the gap in homeschooling that he needed. His Internship at Mecklenburg Electric was invaluable to see how skills were applied." she said.

"I'm so appreciative of the transitioning from home school. The CTA programs came at the perfect time. It has served him so well in that transition and he's better prepared for his time in the military." Mom Jody adds.

Ronald (pictured right above) went through CTA's IT program as well. During his work based learning program, he worked at Posittrak in South Hill. Ronald build and services software and hardware as well as learned



customer service by taking troubleshooting calls from customers.

Ronald continued working remotely for Posittrak after his internship ended and he currently takes classes at Tidewater Community College for Computer Science.

Ronald has been a volunteer firefighter and is studying for his firefighting certifications. Ronald was also a homeschool student and found a good fit to help him achieve his goals through the Career Tech Academy.

**Congratulations to all of our Career Tech Academy alumni and the successes they have achieved. We hope to hear many more success stories in the future and we will continue to keep in touch!**



## Jared at CTA



*In 2019, Jared Dawson enrolled in CTA's Industrial Technology (then*



*known as Mechatronics) program. He signed up for*



*the Year 2 program, Worked Based Learning the next year.*

## Speedway—cont. from front

competitive out there. It means a lot to me.”

Dawson had no idea it would be possible to win Rookie of the Year honors.

“I didn’t think I had a shot for it, just because it was my first year and I was trying to learn and trying to compete against the guys in the division,” Dawson pointed out.

Dawson compiled a solid record while competing in the Budweiser Pure Stock Division, a division that was top-heavy with experienced drivers. He finished eighth in the final division point standings with four Top-Five finishes and never finished outside of the Top-10.

“Racing in the Pure Stock Division was a big learning experience for me,” Dawson remarked. “It’s really tough in that division trying to race with the 3 car (division champion Nathan Crews), the 9 car (division runner-up Johnny Layne), and my brother (Justin Dawson). It’s real tough racing those guys.”

Winning the Rookie of the Year title in the Budweiser Pure Stock Division was a big honor but Dawson’s 2021 season accomplishments went beyond that. Dawson finished the 2021 season as the runner-up in the Budweiser Hornets Division point standings with two wins, eight Top-Five finishes and Top-10 finishes in all starts.

That is a stellar record considering he was racing different cars each race night, going back and forth between the front-wheel drive Hornets Division car and the rear-wheel-drive Pure Stock Division car.

“I learned a lot going from a front-wheel drive car in the Hornets Division to a rear-wheel drive car in the Pure Stock Division,” Dawson said. “There is a lot of difference going from a front-wheel drive car to a rear-wheel drive car. There are a lot of adjustments that you’ve got to make going from one car to the other. You also have to remember to do the same routine in going from one car to the other.

“It took me a lap or two to adjust to the different car,” added Dawson.

“After a lap or two I could get into my groove and race the race.”

Dawson enjoys racing and the competition. However, the big thing for him is the time spent with his family at the speedway. One of his two broth-

ers, Justin Dawson, competed in the Budweiser Pure Stock Division. His other brother, Drew Dawson, competed in the Limited Sportsman Division. His cousin, Josh Dawson, competed in the Budweiser Hornets Division.

“I really wanted to go out there and race my brother in the Budweiser Pure Stock Division,” Jared Dawson said. “That’s what we’re out here for – racing each other. I like racing my brother, my cousin, and everybody. It’s the family going out here racing and having fun. This really is the only quality time we get together. The main reason we are out here is to have fun and spend quality time with our family.”

The 2022 season will be another season of learning for Dawson as he plans to move up the racing ladder.

“I was going to race in Pure Stock for a couple of years but we ran across a really good deal on a Late Model car,” Dawson explained. “We ended up selling the Pure Stock car got a Late Model, and I’m going to run that some next year.”

South Boston Speedway will celebrate its 65th anniversary season in 2022 with a tentative 14-event schedule. The 2022 season opener is set for Saturday, March 19 featuring the track’s four regular racing divisions, the Advance Auto Parts Weekly Series Late Model Stock Car Division, the Limited Sportsman Division, the Budweiser Pure Stock Division and the Budweiser Hornets Division.

Special events on the tentative 2022 season schedule include an event on April 2 for the SMART Modified Tour and the recently announced Sentara Healthcare American Sprint Car Weekend on April 29-30 featuring the first-ever races for 410-winged sprint cars at South Boston Speedway.

The track’s showcase 200-lap Late Model Stock Car race on July 2, the official celebration of the track’s 65th anniversary on August 6, and an event for the Solid Rock Carriers CARS Tour on October 22 featuring the series’ Late Model Stock Car and new Pro Late Model divisions are also among the special highlight events for the 2022 season.

The tentative 2022 South Boston Speedway schedule can be found on the speedway’s website, [www.southbostonspeedway.com](http://www.southbostonspeedway.com).

*Article reprinted from  
speedwaydigest.com*

# Partnering with Mike's Radio and TV

Mike's Radio and TV has been in business in South Boston, VA for over 40 years. Mr. Stevens not only repairs televisions and radios but also antique and unusual items such as juke-boxes. He also conducts antennae installations.



Mike and his wife Patty have hosted an intern for the Career Tech Academy for two years now. Students have received the benefits of a life-long vocation in that Mr. Stevens shares his knowledge and mentors the students.

Patty takes a role in nurturing the students, advising them, and even preparing home cooked meals!

Vince, the current student at Mike's said he has learned a lot about electronics, wiring, electricity and installation as well as gaining some customer service skills by going out on house calls with Mr. Stevens. Finding a business that does house calls is rare these days.

Mike's TV Service is a licensed and certified electronic company offering TV sales and

services. They are dedicated to providing quality TVs, prompt services, and professional workmanship to their valued customers. At Mike's TV Service, electronic technicians are experienced, knowledgeable, and prepared to exceed customer expectations.

Call Mike's TV Service today at 434-575-5527 for more details. Their friendly and professional staff is available to answer any questions you may have about the company or their services.

317 Main Street  
South Boston, VA  
Hours of Business:  
Monday to Friday: 9:00am-5:00pm  
Saturday: 9 am-12 noon



## David's Corner—David Kenealy

### *Is the Metaverse Relevant to the CTA?*

Considering a combination of definitions, the metaverse is partially a digital reality (hypothesized iteration of the internet) that combines

aspects of social media, supports persistent online 3-D virtual environments, augmented reality (AR), virtual reality (VR), through conventional personal computing to allow users to interact virtually.

Metaverse ambitions could be viewed as focusing on improving technological limitations with current virtual and augmented reality environments. And, promoting the use of metaverse spaces to business, education, and retail applications.

Quoted from Investopedia - "As the metaverse grows, it will create online spaces where user interactions are more multidimensional than current technology supports. Instead of just viewing digital content, users in the metaverse will be able to

immerse themselves in a space where the digital and physical worlds converge."

And, Zuckerberg wrote in a "Founders Letter, 2021" released on Oct. 28. "In the metaverse, you'll be able to do almost anything you can imagine — get together with friends and family, work, learn, play, shop, create — as well as completely new experiences that don't really fit how we think about computers or phones today....In this future, you will be able to teleport instantly as a hologram to be at the office without a commute, at a concert with friends, or in your parents' living room to catch up,"

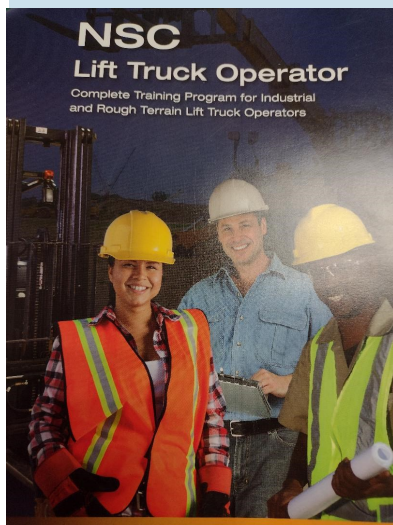
Innovators stay aware of emerging technology sooner than most. Unfortunately, education is typically slow to integrate newer technologies into their applied instruction. The instructors (i.e. innovators) in the CTA work hard to stay focused on delivering the best possible student experience and seize opportunity to create new, meaningful learning objectives. As such, keeping abreast of opportunities for program adoption of the emerging Metaverse technologies is worthwhile.

## CONT. from page 2

The course helps students learn not only safety basics for forklift operators but integrated group-based activities and hazard-based scenarios presented with graphically rich visual materials.

- \* Moving with and without a load
- Picking up and stacking a load
- Special considerations, such as trailers, ramps and elevators
- Working safely around forklifts
- OSHA Powered Industrial Truck Standard 1910.178 and 1926.602 compliance

This course will also be offered to all employees of the Southern VA Higher Ed Center and to the public. For more information, please call Lisa Mettler at 434-572-5658 or email at [lisamettler@svhec.org](mailto:lisamettler@svhec.org).



## From the Desk of the Admin

### Stephanie Robinson



Why should a vocational degree be considered? How many of us were told growing up that a 4-year degree was the only way? Times have certainly changed since the 1990's when I graduated high school and college. While networking with businesses within our region, some of us "old-school" parents may want to rethink what we are pushing and emphasizing to our children.

Promoting the Career Tech Academy programs has been a true learning experience in understanding how diverse the careers are in information technology, power and energy, automation robotics and welding. Our local employers are begging for a skilled workforce NOW in all of our programs. Numerous CTA completers have entered the workforce making \$35,000+ annually with nationally recognized industry credentials and ONLY a career studies certificate from a community college. When I graduated from Longwood College in 1999 and took my first teaching job with Prince Edward County Schools, I was only making \$35,000 with a bachelor's degree and \$32,000 in student loan debt. Many individuals graduating with a bachelor's degree now may only start in the mid-\$30,000 to low \$40,000, but have tons of student debt to pay back. Seeing what I see now, I do not push or emphasize the associate's or 4-year degrees unless it is truly needed for their chosen career path.

#### 4 reasons to consider CTA or a vocational degree:

**Cost:** The students who attend the Career Tech Academy are fortunate enough to have the school district pay the community college tuition. This expense ranges between \$2500-3500 for the year-long program. That is a HUGE savings for many families AND NO DEBT FOR STUDENTS COMPLETING THE PROGRAMS. Some of our CTA students do decide to further their education. Once a CTA student has decided to attend community college or a 4-year institution, we work closely with them to assist with transferring credits to continue to reduce expenses on tuition.

**Course Length:** The CTA programs focus strictly on hands-on learning and applying knowledge from course lectures. The year-long programs (August-May) strictly focus on coursework so students will be prepared for entry-level workforce positions. CTA students leave with a career studies certificate and industry credentials compared to their high school peers with an associate's degree that is not attached to anything.

**Financial Aid:** CTA students are receiving a community college education for FREE because the school district pays the tuition. No FASFA information is needed UNLESS they continue their education after completion.

**Job Mark for Graduates:** CTA is now in its 4<sup>th</sup> year. We have had 7 students offered full time employment before even completing our programs. The local businesses have worked with our programs and are asking for recommendations on potential graduates interested in employment. Our work based learning program can give students a foot in the door in 12<sup>th</sup> grade.

If you would like more information or to even schedule a tour please call or email me. Those interested in joining the Career Tech Academy during the 2022-23 school year, please complete the google form

(<https://docs.google.com/forms/d/1DJXPsvLa0gWRni0YGPeLzvOzvf3b6Z1crRZDOV4UsV0/prefill>)

so we can follow up with you and guidance at your school.