Internship Final Paper

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Introduction

Becoming an intern at the Innovation Lab (iLab) was a unique experience compared to what many students typically expect from internships. This semester was my second semester working at the iLab. Initially, I had been actively searching for an internship that was more directly related to cybersecurity. I applied to several IT-related internships and even participated in interviews, but unfortunately, I did not receive follow-up responses. As the start of the semester approached, I reached out to my supervisor at the iLab to ask if there were any available positions that would allow me to return and complete my internship course requirements. Fortunately, she was able to find an open position for me and expressed excitement about having me returning for another semester.

Compared to my first semester at the iLab, I was able to participate in significantly more activities and responsibilities during this second term. During my previous semester, the iLab was in the process of relocating to a new facility, so much of the work consisted primarily of outreach events rather than hands-on work within the lab itself. However, during this semester, the relocation had been completed, and the new facility was fully operational. This allowed me to work directly with equipment, participate in educational programming, and learn new technical and leadership skills.

The Innovation Lab is a learning space dedicated to expanding access to hands-on STEM and makerspace education. The lab provides educational programs for youth, educators, and community members designed to promote creativity, critical thinking, and collaboration through real-world problem-solving activities. The iLab originally opened in 2019 and has served as a

hub for experimental learning in areas such as technology, engineering fabrication, robotics, and computer science. The current facility is located at 600 Butler Farm Road in Hampton, Virginia. Prior to this location, the lab operated out of the Brooks Crossing building located in the Southeast Community of Newport News. The relocation to the Hampton location occurred in June 2025, and during my first semester, many materials were still being unpacked and organized.

During my internship, I worked in an environment that supported both outreach programs and in-lab field trips. While in my first semester I mainly did outreach events, this semester involved weekly events and classroom-style instruction for visiting student groups. Some of the equipment available at the iLab included 3D printers, robotic arms, robotic cars, laser engravers, heat press machines for creating T-shirts, and microcontrollers such as Raspberry Pi Pico boards. Having access to this wide range of technology created many opportunities to learn new skills and assist students in hands-on STEM activities.

One of my primary goals was to improve my leadership skills. I wanted to become more confident in presenting ideas, guiding others, and stepping into leadership roles when necessary. Throughout the semester, I discovered that even as an intern, my ideas and opinions were valued by my supervisor. This support gave me confidence and allowed me to take initiative in situations where I may have previously felt uncomfortable. My supervisor's trust encouraged me to advocate for new ideas and even begin developing new lesson plans that could potentially expand the educational offerings at the iLab.

Another learning objective I hoped to achieve was improving my communication skills, particularly when working with large groups of students. During my time at the iLab, I worked with students ranging from kindergarten through high school seniors. My first ever event my first

semester working at the iLab involved participating in an outreach event at Naval Air Station Oceana. This event included over one thousand fifth-grade students from Virginia Beach and Chesapeake who were attending a large field trip that concluded with an air show. Initially, managing such a large group of students was overwhelming, especially since it was my first outreach event. However, as the day progressed, I adapted to the environment and became more comfortable interacting with the students. I found great satisfaction in watching students become excited about learning, particularly when they were introduced to new technology.

One of the primary tools used during outreach events was the Sphero robot system. These small robotic spheres can be programmed using drag-and-drop block coding, making them accessible to students who are new to programming concepts. Students learned how coding inputs directly influenced the movement of the robot, helping them understand the relationship between commands and physical actions. Observing students become engaged with coding and robotics reinforced my interest in STEM education and strengthened my communication abilities.

A third learning objective I hoped to accomplish was developing stronger technical and instructional skills through hands-on work with advanced equipment. During field trips hosted at the iLab, kindergarten students participated in activities involving laser cutting technology. These students created "shape monsters" while learning basic concepts about laser engraving and cutting. One significant moment during this semester occurred when my supervisor experienced an emergency and asked me to begin leading the lesson before she arrived. Although I initially felt nervous, I accepted the responsibility and successfully led the activity. As additional field trips occurred, I became the primary instructor responsible for teaching the laser activity while other interns assisted students individually.

This experience marked the beginning of my transition into a leadership role. Over time, I became more confident speaking to large groups, organizing materials, and guiding students through technical activities. My leadership development continued when I was selected to serve as the camp facilitator for a week-long robotics, engineering, and coding camp serving students from third through sixth grade. This opportunity required me to coordinate daily activities, manage classroom behavior, and guide students through hands-on learning experiences.

Throughout this semester, I also identified an opportunity to expand the technical offerings available at the iLab. I noticed that several Raspberry Pi Pico microcontrollers were available but not actively used in existing lesson plans. I requested permission to borrow one of the microcontrollers along with a breadboard and LED lights so that I could learn how to use them independently. My goal was to develop a new lesson plan designed for high school students that introduced basic Python programming and electronics.

The lesson plan I began developing focused on creating a functional stoplight system using red, yellow, and green LED lights connected to a Raspberry Pi Pico microcontroller. Students would learn how to write Python code that controlled the timing and sequencing of each light, simulating a real traffic signal. Although this project was not overly complex, it will provide a nice introduction to programming logic, electrical circuits, and problem-solving. This project also strengthened my personal interest in computer hardware and cybersecurity, as understanding hardware systems contributes to a deeper understanding of how secure systems operate.

As I continued working with microcontrollers, I developed a stronger interest in Raspberry Pi technology. This interest eventually led me to purchase additional Raspberry Pi devices and begin building a small home lab environment where I could practice cybersecurity

techniques learned in my coursework. This personal exploration reinforced my belief that cybersecurity knowledge is closely connected to hardware and system-level understanding. Overall, my internship experience at the Innovation Lab provided numerous opportunities to develop leadership skills, communication abilities, and technical knowledge.

Management

The management environment at the iLab was somewhat different from what many students might expect from a traditional corporate internship. Instead of operating within a highly rigid structure, the iLab functioned with a more flexible and collaborative management style. This environment encouraged independence, creativity, and teamwork among interns while still providing guidance when necessary. Overall, I found the management style to be effective for the type of work performed at the iLab, particularly because many projects required creativity, communication, and adaptability.

The primary supervisory structure at the iLab consisted of one main supervisor who oversaw the interns and coordinated daily activities. The supervisor was responsible for assigning tasks, organizing outreach events, managing field trips, and ensuring that all programs were properly staffed and supplied. In addition to the supervisor, several graduate students worked at the iLab while completing their master's degree programs. These graduate students were responsible for assisting with lesson development and helping manage large-scale projects.

One aspect that made the management environment unique was the level of independence given to interns. Rather than being constantly monitored, interns were trusted to complete assigned tasks with minimal supervision. This level of trust created an environment where interns were expected to take responsibility for their own work and collaborate with others when

necessary. For example, when preparing materials for field trips or outreach events, we interns often worked together to organize supplies, test equipment, and set up workstations. This teamwork allowed tasks to be completed efficiently while also encouraging communication among team members.

Although the management structure was somewhat informal, expectations remained clear. Tasks were typically assigned at the beginning of each shift, we also had a whiteboard for a to do list. The list provided an opportunity to review upcoming events, assign responsibilities, and discuss any special requirements related to equipment or materials. This communication helped ensure that all team members understood their roles and responsibilities before beginning their work. I found this system to be effective because it provided direction while still allowing flexibility in how tasks were completed.

I found the management environment at the iLab to be highly effective for building both teamwork and individual growth. The balance between independence and guidance allowed interns to develop confidence while still having access to support when needed. The collaborative nature of the workplace also strengthened relationships among us interns, making it easier to share knowledge and assist one another during complex tasks.

Work Duties

One of my primary responsibilities was assisting with and teaching field trips that visited the Innovation Lab. These field trips included students ranging from kindergarten through high school seniors. The field trips were designed to introduce students to STEM concepts through hands-on activities that allowed them to interact with modern technology. One of the most common field trip activities involved teaching kindergarten students about laser cutting and

engraving technology. During this activity, students created shape monsters. This involved the students cutting out shapes on a piece of paper, and gluing the shapes onto another piece of paper. Then they would be able to add details to the with a black marker, and then they would outline their monster with a red marker. That was our laser knew what to cut out and what to engrave.

At first, my role during field trips was to assist other instructors by helping students individually and ensuring that materials were distributed properly. However, over time, I became more comfortable with the structure of the lessons and began taking on greater responsibility. One significant moment occurred when my supervisor experienced an emergency and was unable to arrive at the lab on time. She contacted me and asked if I would feel comfortable beginning the lesson with the group of kindergarten students. I accepted the responsibility and began leading the activity. I explained the lesson objectives, demonstrated how the materials should be used, and guided the students through the activity until additional staff arrived. After successfully completing that session, I became more confident in my ability to lead similar activities, and eventually, I became the primary instructor responsible for facilitating the laser-based field trip lessons.

Another major duty involved preparing takeaway items using 3D printing technology. These printed items were given to visiting students as souvenirs from their time at the iLab. Initially, the primary item being printed was a lion model, which represented the mascot of Old Dominion University. While working with the 3D printers, I began experimenting with additional design files and discovered adjustable robot figures that could be printed with movable limbs. After testing several designs and producing sample prints, I presented the robot

models to my supervisor. She approved the new design, and from that point forward, both lion models and robot figures were printed to give students more options.

In addition to working with 3D printers, I also participated in large-scale production projects involving T-shirt creation. The iLab frequently received bulk orders that required the use of heat press machines and vinyl cutting equipment. During these projects, we interns worked together to complete each stage of the production process. Responsibilities included preparing digital designs, cutting vinyl materials, positioning designs on fabric, and operating the heat press machines to apply the designs. Because these orders often involved large quantities, teamwork was essential to ensure that deadlines were met. This experience helped me develop time management skills and reinforced the importance of collaboration when working on large production tasks.

My most significant responsibility I was given during my internship was serving as the facilitator for a week-long robotics, engineering, and coding camp during spring break. This assignment required me to take on a leadership role and coordinate daily learning activities for students ranging from third grade to sixth grade. The camp focused on hands-on learning experiences that introduced students to engineering design, robotics, and coding fundamentals. Each day of the camp featured a different themed activity designed to build upon previously learned concepts.

On the first day of the camp, students were tasked with building small motorized boats. After assembling their boats, students tested their designs in water to observe how different shapes and materials affected performance. This activity introduced basic engineering principles such as buoyancy, balance, and propulsion. Students were encouraged to analyze their designs and identify ways to improve their performance.

The second day of the camp originally focused on programming robotic arms. However, I observed that many students were highly invested in improving their motor boat designs from the previous day. Recognizing their enthusiasm, I made the decision to allow students to spend additional time refining their boats before transitioning to the robotic arm activity later in the day. This adjustment demonstrated adaptability and responsiveness to student engagement, which are important qualities in both teaching and leadership roles.

The third day of the camp focused on 3D printing and computer-aided design (CAD). Students used a program called Tinkercad to design custom boat models and keychains. Before beginning the digital design process, students participated in a hands-on experiment that tested different boat shapes to determine which designs floated most effectively and carried the greatest amount of weight. This experiment introduced basic scientific reasoning and reinforced the importance of testing and observation in engineering.

The fourth day of the camp was one of the most engaging activities for both students. During this session, students built and programmed small robots that were required to navigate obstacle courses. Students used block-based coding systems to control movement and adjust their programs based on the robot's performance. This activity introduced programming logic and problem-solving skills while maintaining a fun and competitive atmosphere.

The final day of the camp focused on programming simple microcontrollers capable of reading temperature data. After learning how to program the devices, students conducted experiments outside the building to test temperature readings in different environments, such as shaded areas, near water sources, and in direct sunlight. This activity introduced students to

environmental data collection and reinforced the importance of testing technology in real-world conditions. At the end of the camp, students were given the opportunity to revisit their favorite stations, and many chose to return to the robotics programming activities.

Besides my assigned duties, I also took initiative to develop new educational content using Raspberry Pi Pico microcontrollers. While organizing equipment in the lab, I noticed that several Pico microcontrollers and breadboards were available but not currently being used in active lesson plans. Recognizing an opportunity to introduce more advanced content for older students, I asked my supervisor for permission to borrow the equipment and develop a new lesson plan.

The lesson plan I began creating focused on teaching students how to program LED lights using Python and breadboards. The goal of the project was to create a functioning stoplight system using red, yellow, and green LED lights. Students would connect the LEDs to the microcontroller using a breadboard and write code to control the timing of each light. This project will introduced students to electrical circuits, programming logic, and timing systems. Although still in development, this lesson plan demonstrated initiative and creativity while contributing to the long-term growth of the iLab's educational programs.

Cybersecurity Skills

Although my internship at the iLab was not primarily focused on cybersecurity, I was still able to apply several cybersecurity-related skills and develop new technical knowledge that strengthened my overall understanding of technology systems. Cybersecurity is not limited to monitoring networks or responding to security incidents; it also involves understanding how

hardware, software, and systems interact. During my internship, I gained experience that helped reinforce this broader understanding of cybersecurity concepts.

One of the most valuable skills I had prior to the internship was familiarity with the Linux operating system and the use of the command-line terminal. Through my coursework, I learned how to navigate file systems, use basic commands, and understand system-level operations within Linux environments. This knowledge became useful when I encountered a Raspberry Pi 4 computer at the iLab that was running a Linux-based operating system.

While exploring the Raspberry Pi system, I used the Linux terminal to navigate directories and examine files stored on the device. Although this task was not formally assigned to me, it allowed me to apply the knowledge I had previously learned in class to a real-world system. This experience reinforced my confidence in working within Linux environments and strengthened my understanding of how operating systems function at a deeper level. Having the ability to interact with systems through the terminal is an important cybersecurity skill because many security tools and configurations rely on command-line interfaces.

While working with the Raspberry Pi Pico, I began learning how to program the device using Python. This process involved understanding how software instructions could control hardware components, such as turning LED lights on and off at specific intervals. Learning how code interacts directly with hardware systems gave me a greater appreciation for how devices function at a low level. From a cybersecurity perspective, understanding how hardware operates is valuable because vulnerabilities often occur when software interacts improperly with hardware components.

In addition to working with individual devices, my experience also influenced my interest in building a personal home lab environment. After becoming more familiar with Raspberry Pi devices at the iLab, I decided to purchase additional Raspberry Pi hardware for personal use. This allowed me to begin creating a small home lab where I could practice cybersecurity techniques outside of the classroom. A home lab environment provides a safe and controlled setting where cybersecurity students can experiment with operating systems, networking tools, and security software without risking damage to production systems.

Through the development of my home lab, I began practicing tasks such as installing operating systems, configuring network settings, and exploring different system environments. These activities I learned in ODU's cybersecurity coursework and allowed me to gain hands-on experience working with real systems. The ability to build and manage a home lab environment is considered an essential skill for many cybersecurity professionals, as it allows individuals to continuously test and improve their technical abilities.

I also developed important soft skills that are highly relevant to cybersecurity careers. Communication, teamwork, and problem-solving are essential skills in cybersecurity environments, particularly when working as part of a response team or collaborating with system administrators. During my internship, I frequently communicated with other interns to coordinate tasks, and manage student activities. These experiences strengthened my ability to communicate technical information clearly and efficiently.

One important realization I had during my internship was that cybersecurity concepts are present in nearly every area of technology, even when security is not the primary focus. For example, when working with microcontrollers and connected devices, it became clear that any device capable of receiving instructions could potentially be targeted or manipulated if not

properly secured. This reinforced the idea that cybersecurity extends beyond traditional network security and includes hardware security, embedded systems, and device-level protection.

ODU Curriculum

The ODU cybersecurity curriculum provided a foundational understanding of many of the technical and conceptual skills that I applied during my internship at the iLab. While not all aspects of my internship directly aligned with cybersecurity coursework, several key areas of my academic preparation proved useful, particularly in system navigation, technical problem-solving, and general computing concepts. At the same time, my internship also revealed gaps between academic learning and real-world application, especially in areas involving hands-on hardware interaction and informal teaching environments.

As stated before one of the most directly applicable skills from my ODU coursework was my experience with Linux operating systems and command-line navigation. In cybersecurity courses, I learned how to use the Linux terminal to navigate file systems, manage directories, and execute basic system commands. This knowledge became relevant when I encountered a Raspberry Pi 4 device running a Linux-based operating system.

This showed a clear connection between my academic coursework and practical application. In the classroom, Linux is often taught in structured lab environments with specific assignments. However, in the internship setting, I was able to apply these skills independently without step-by-step instructions. This helped me develop confidence in my ability to work with unfamiliar systems and reinforced the importance of foundational knowledge in cybersecurity education.

Another area where my ODU curriculum was helpful was in developing a general understanding of programming logic and computational thinking. Courses that introduced Python programming and basic coding structures helped me understand how instructions are written and executed by machines. This knowledge became especially useful when I began working with Raspberry Pi Pico microcontrollers during my internship. When I was developing a lesson plan involving LED lights controlled by Python code.

Although the programming environment used in the iLab was more hardware-focused than what I experienced in coursework, the underlying logic remained the same. This connection between classroom learning and physical computing helped bridge the gap between abstract programming concepts and real-world applications. It also reinforced the idea that programming is not limited to software development but is also essential in controlling physical systems.

My internship introduced me to concepts that I had not yet encountered in my coursework. For example, working with microcontrollers and embedded systems provided a deeper understanding of how hardware and software interact at a physical level. While cybersecurity courses often focus on networks, operating systems, and digital security, my experience at the iLab exposed me to the importance of hardware-level understanding. This includes how devices receive instructions, how electrical signals are transmitted, and how physical systems can be programmed to perform specific functions.

Fulfillment of Internship

Working at the iLab, I established several learning objectives that I hoped to achieve throughout the semester. These objectives were focused primarily on developing leadership skills, improving communication abilities, and gaining more hands-on technical experience in a

STEM-focused environment. Reflecting on my internship experience, I can say that each of these objectives was met, with some areas exceeding my expectations and others evolving in ways I did not initially anticipate. One of my primary objectives was to develop stronger leadership skills. I specifically wanted to become more confident in guiding others, taking initiative in group settings, and contributing ideas. This objective was fully achieved through multiple experiences during my internship.

Another objective I aimed to achieve was improving my communication skills, particularly in environments involving large. This objective was also successfully met. During the internship, I worked with students ranging from kindergarten through high school seniors, which required me to adjust my communication style depending on the audience. For younger students, I learned to simplify technical language and use more visual and hands-on explanations. For older students, I was able to introduce more advanced concepts related to coding, robotics, and engineering systems.

My third objective was to gain hands-on experience with technical systems, particularly in areas related to computing, programming, and hardware interaction. While the iLab internship was not primarily a cybersecurity position, I was still able to achieve this goal through direct interaction with equipment such as 3D printers, robotic systems, laser cutters, and Raspberry Pi microcontrollers. One of the most impactful experiences related to this objective was working with the Raspberry Pi Pico microcontroller and developing a lesson plan involving Python programming and LED circuits.

Although all of my original objectives were achieved, I also experienced additional learning outcomes that were not initially planned. One of the most significant unexpected outcomes was the development of instructional and curriculum-building skills. Creating lesson

plans, adapting activities based on student engagement, and developing new educational content for high school students introduced me to the process of designing structured learning experiences. This was not an initial goal of my internship, but it became one of the most valuable skills I developed.

Another unexpected outcome was increased adaptability and confidence in unfamiliar situations. Throughout the internship, I frequently had to adjust to changing circumstances, such as last-minute schedule changes, equipment issues, or shifts in student engagement. Learning to remain flexible and composed in these situations helped me grow professionally and reinforced my ability to handle uncertainty in a structured work environment.

Most Motivating

One of the most motivating aspects of my internship was the opportunity to directly impact students through hands-on STEM education. Unlike traditional classroom learning, the iLab environment allowed students to physically interact with technology such as robotics, 3D printers, laser cutters, and coding tools. Being part of the process where students transitioned from initial confusion to understanding and excitement was highly rewarding. Seeing students reactions when a robot they programmed moved successfully or when a design they created was physically printed helped showed me the importance of experiential learning in STEM education.

Another highly motivating aspect of the internship was the level of trust and responsibility I was given over time. Early in the internship, my role primarily involved assisting other instructors and supporting activities during field trips and outreach events. However, as I gained experience and demonstrated reliability, I was given more leadership responsibilities.

Being trusted to manage a classroom environment and guide students through a technical activity gave me a strong sense of accomplishment and confidence.

This trust continued to grow when I was selected to serve as the facilitator for the robotics, engineering, and coding camp. Having the opportunity to lead an entire program reinforced my leadership abilities and showed me that I was capable of managing both technical instruction and group dynamics. The responsibility itself was motivating because it demonstrated that my contributions were valued by the iLab.

Another exciting aspect of the internship was working with a wide variety of technology and equipment. Each piece of equipment offered a different type of learning experience, and I enjoyed the process of understanding how each system functioned. In particular, working with Raspberry Pi Pico microcontrollers and developing a Python-based LED stoplight project was especially engaging because it combined programming with physical hardware interaction. This hands-on experience made abstract coding concepts feel more tangible and practical.

Additionally, the creative freedom to develop new ideas was highly motivating. Having the ability to contribute ideas and potentially shape future curriculum content made the internship feel meaningful. Working with students of different age groups was also an enjoyable and motivating part of the experience. Each group presented unique challenges and learning opportunities. For younger students, the excitement came from introducing them to STEM concepts for the first time and seeing their curiosity grow. For older students, the motivation came from engaging in more advanced discussions about engineering, coding, and problem-solving. Adapting my teaching style to fit different audiences helped keep the work dynamic and engaging throughout the semester.

Most Discouraging

While the internship was overall a positive and valuable experience, there were several aspects that I found less motivating in relation to my academic and career goals. These challenges were not necessarily negative in nature, but they did highlight differences between my expectations for a cybersecurity-focused internship and the reality of working in a STEM education and outreach environment.

The most significant aspect of the internship was the limited direct connection to cybersecurity-specific tasks or environments. Prior to beginning the internship, I was looking for others in hopes to gain more hands-on experience related to cybersecurity tools, network security, system monitoring, or digital defense practices. However, the iLab primarily focuses on STEM education, outreach programs, and hands-on learning for K–12 students. As a result, most of my daily responsibilities centered around teaching, assisting with educational activities rather than working directly with cybersecurity systems.

Although I was still able to apply some cybersecurity knowledge indirectly such as using Linux systems, exploring Raspberry Pi devices, and developing technical understanding the internship did not provide structured exposure to cybersecurity operations or professional security environments. This limitation meant that I had to take initiative on my own to connect internship experiences to my field of study, rather than learning cybersecurity concepts through assigned tasks or formal training.

Despite these limitations, I recognize that these challenges were a natural part of the internship environment and the mission of the Innovation Lab. The organization is primarily focused on education and community engagement rather than cybersecurity or IT operations. However, these challenges also encouraged me to take initiative in connecting my cybersecurity knowledge to the available resources, such as developing independent projects with Raspberry Pi devices and building a personal home lab.

Most Challenging

I would say the most challenging aspects of the internship was adapting to the wide range of responsibilities and age groups I worked with on a regular basis. Unlike a specialized technical role, my internship required flexibility in switching between tasks such as assisting with kindergarten STEM lessons, supporting high school engineering activities, preparing materials for events, and facilitating outreach programs. Each of these responsibilities required a different communication style, level of technical explanation, and approach to engagement, which made adaptability essential.

Another challenge was learning how to effectively manage large groups of students during field trips and outreach events. Some events included dozens or even hundreds of students at once, which required maintaining attention, ensuring safety, and keeping students engaged in hands-on activities. Early in the internship, this level of coordination was overwhelming, especially during my first outreach event at Naval Air Station Oceana. However, over time I developed stronger classroom management skills and became more comfortable working in high-energy environments.

Recommendations

Based on my experience at the iLab, I would recommend that future interns come into the internship with a strong mindset of flexibility, teamwork, and willingness to learn. The iLab environment is dynamic and fast-paced, and interns should be prepared to adapt to different tasks, age groups, and responsibilities on a daily basis.

One of the most important preparations for future interns is developing strong communication skills. Interns will frequently be required to explain technical or STEM concepts to students ranging from kindergarten through high school. Being able to simplify complex ideas and adjust explanations based on the audience is essential for success in this role. Practicing public speaking or teaching concepts to others beforehand would be highly beneficial.

I would also recommend that future interns become comfortable working in collaborative environments. Many tasks at the iLab require teamwork, such as preparing materials for events, assisting during field trips, and operating equipment during hands-on activities. Being able to communicate effectively with other interns and staff members helps ensure that tasks are completed efficiently.

Finally, I would encourage future interns to come in with an open mindset toward learning different types of STEM tools and technologies. The iLab uses a wide range of equipment, including 3D printers, robotic systems, laser cutters, and microcontrollers. Having a willingness to explore unfamiliar technology will make the learning experience more rewarding.

Conclusion

My internship experience at the Innovation Lab was a highly valuable opportunity that contributed significantly to my personal, academic, and professional development. Throughout

the semester, I was able to gain hands-on experience in STEM education, develop leadership and communication skills, and apply technical knowledge in a real-world environment.

One of my main takeaways from this experience is the importance of adaptability. The internship required me to work with a wide range of students, tasks, and technologies, often with little notice or preparation time. Learning how to adjust to changing situations and remain effective under pressure was one of the most important skills I developed.

Another key takeaway is the value of leadership and initiative. Being trusted to lead lessons, facilitate camps, and contribute ideas for new programs showed me that leadership is not limited to formal positions. Even as an intern, I was able to make meaningful contributions by stepping up when needed and taking responsibility for my work.

The internship will influence the remainder of my time at Old Dominion University not by much since this is my last semester, graduating in the spring. Professionally, this experience helped me better understand the type of work environment I enjoy and the skills I want to continue developing. While the internship was not directly focused on cybersecurity, it strengthened my interest in hardware systems, programming, and technical education. It also showed me how cybersecurity knowledge can be applied broadly across different fields, including education and embedded systems.

Overall, my experience at the iLab helped shape my growth as a student and future professional. It challenged me to step outside of my comfort zone, develop new skills, and gain confidence in my abilities. I will carry the lessons learned from this internship into my future academic work and career path.

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