

# **Internship: Reflective Paper Final**

by

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ITS Help Desk at Old Dominion University

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## Introduction

I am a student at Old Dominion University (ODU). I discovered this opportunity through the Handshake service offered to ODU students, and it aligned with my academic interests and career aspirations. If I hadn't been perusing the ODU portal page and happened to scroll through Handshake, I don't believe I would've heard about it otherwise. Interestingly, I was unsure of what to expect when starting this role. I picked it since it was a student job on campus related to my major.

Throughout this paper, you will learn my thoughts about the job, the enterprise environment, some incidents, the systems involved, the skills I've developed, and problems that have arisen along the way. This experience has enhanced my technical knowledge and provided valuable lessons in communication, patience, and adaptability. Each day, I learned some new procedure or service I was unaware of. I've been exposed to various customers, experiences, and organizational procedures throughout this process.

## Objectives

1. Technical Problem-Solving Skills: Develop the ability to diagnose, troubleshoot and resolve a variety of hardware and software issues encountered by a variety of users.
2. Customer Service Excellence: Enhance communication skills to effectively interact with clients, ensuring that their concerns are addressed professionally and efficiently.
3. Time Management and Prioritization (triage): Learn to manage and prioritize multiple support tickets, balancing urgent issues with ongoing tasks to maintain productivity.
4. Knowledge of IT Systems and Tools: Gain hands-on experience with IT management systems, such as ticketing systems and remote support tools, to improve technical proficiency.

## Objectives cont.

One of the first things I learned in an IT class was how essential soft skills are. I mean that quite literally, as my first cybersecurity-class notebook, "soft skills" is underlined on the first page. Even in this traditionally impersonal world of computers, it is vital to have refined soft skills and excellent customer service. I find that it is important to be articulate and patient when resolving issues in a work position and in everyday life. Communicating appropriately to different departments and users with varying levels of technical experience is essential when conveying risk and advice, ensuring everyone is on the same page.

When I was young, I participated in programs that promoted critical thinking and problem-solving skills. These programs benefited me greatly, not particularly with my skills but

with my outlook on problems. Each challenge is an opportunity for growth and learning. Learning basic IT systems and tools can increase my technical proficiency and, at the same time, assist with the goal of developing problem-solving skills. By having a more extensive array of tools at my disposal, I can more accurately identify the issue and its mitigation. The ability to have appropriate time management and prioritization (triage) is essential to maintaining productivity in an environment with multiple systems and varying support tickets. In IT, a ticket represents a user-reported issue related to hardware or software that needs resolution. The more problems I can identify rapidly, the better I can diagnose and triage the situation. I couldn't accomplish the goals mentioned earlier without basic knowledge of enterprise IT systems and tools; you cannot monitor an environment you do not understand nor utilize a tool you do not understand.

## **Utilized Services**

Brief overview and definitions of services which will be referenced throughout the paper.

1. 8x8 Work: Call software used by the University's ITS Help Desk to dial out and receive calls in a queue.
2. ServiceNow: Ticket management software, allows us to triage and handle tickets from multiple sources.
3. Monarch IDentification and Authorization System (MIDAS): ODU's login & privilege management system
4. Monarch-Key: Single Sign-on which utilizes MIDAS to login users in to essential academic and professional services with your MIDAS ID and password
5. Banner: Document management service tied into vital reporting and logging services and softwares, such as ServiceNow, DegreeWorks, Cognos, and LeoOnline

Given that the intended recipients of this paper are staff at Old Dominion University, I am adopting a more straightforward approach in outlining services, with the assumption that they are already familiar with common practices, such as logging in with MIDAS.

## **Getting The Job**

You may be familiar with the organization I work at, Old Dominion University. It is primarily an educational organization with many different departments and objectives. ODU was founded in 1930 as an extension of William and Mary and Virginia Tech, gaining independence in 1962. The primary product is scholars coming from many different areas. We have both ODU on-campus in addition to ODUGlobal hosting a variety of online classes internationally, providing an inclusive hybrid work environment. ODU boasts an array of local and remote

services, a Research 1 Classification, and now the Virginia Health Sciences (VHS), previously Eastern Virginia Medical School (EVMS). This integration has required us to protect private student information and implement practices for handling HIPAA-compliant data. My position is specifically located within the Information Technology Services (ITS) department of ODU in the ITS Help Desk group. The ITS department is spread across ODU's campus. However, the help desk provides a centralized intake for tickets and problems to be tasked to our various other groups.

The onboarding process was tedious and lengthy, but my hiring manager showed personality to make the process a little less impersonal. I had a remote interview via Zoom after accepting the position via email. I was initially hired in November of 2022 with an email titled "Welcome to the team." However, after completing all the paperwork, my first work day was January 2023. Training started with my first week of remote shifts, with additional weeks of training in person, which was typically sixteen hours a week. The remote shifts were learning the material using prepared documentation and exercises. After that first week, I was finally in the office. These office shifts were initially shadowing experiences, watching trained technicians conduct their typical duties. This was a good time, and I enjoyed seeing the process without any of the responsibility in addition to talking to my now co-workers about their experiences. This shadowing process lasted a couple of weeks. After this, I was put on password reset duty, sitting off to the side of the more experienced technicians. This was done so I could get the feel of calling up and talking to users, as well as essential ServiceNow functions. This time also lasted another couple of weeks. After this, I was finally prepared to sit at the front desk and take the large variety of tickets we received throughout my time.

I was initially overwhelmed and did not feel very confident in my abilities at the help desk. Before this, I had no customer service experience apart from the service industry. Nevertheless, I had a large team to support me as I learned the ropes and became accustomed to everyday processes. Once I was finally unleashed on the world, I was constantly making mistakes. However, making mistakes is a part of every job or opportunity. The crucial part about making mistakes is learning from them.

## **Work Environment**

The managers help ensure we always have the latest updates to inform ourselves and users. If you do something wrong, they advise you without intimidation, providing the correct information; the managers allow you to learn from your mistakes. Every month, we were subjected to a review of the tickets we individually handled and our responses. These were done by the managers and the full-time technicians at the Help Desk. The reviews provided insight into how the higher-ups wanted things done and standard operating practices. Suppose we have problems in the office; we can turn around and have a higher-up technician assist. We are monitored through our activity within our support applications, such as ServiceNow and 8x8

Work. As I mentioned, the close proximity also allows managers to review our practices, as they can overhear customer interactions.

Separation of duties is a big deal within ITS at ODU. The ability to work with other departments is crucial within an enterprise environment. As the EVMS applications and services were migrated over by both IT teams or deactivated, so were the IT departments at EVMS managing those services. [specific departmental knowledge]. This can lead to both frustrating and streamlined situations, as merging systems and departments sometimes creates confusion and inefficiencies, but also fosters collaboration and knowledge sharing that can improve overall processes and service delivery. We have been integrating our systems with Eastern Virginia Medical School (EVMS), now Virginia Health Sciences (VHS) at ODU. This integration has resulted in an unusual spike in the number of tickets, with little to no documentation. In addition to these new procedures and systems, existing ones are being modified as VHS applications and departments are retired and absorbed by ODU's IT department. ODU provides a variety of software and services, most of which are displayed with detailed, publicly-facing documentation. However, some have one reference buried deep within a specific department's documentation. When interacting with IT professionals from other departments who are more familiar with particular systems, I sometimes experience imposter syndrome as the point of contact for the ITS Help Desk. Different departments were typically better equipped or managed specific applications, as I redirected the ticket to them. Determining the fine line where my duties stopped and other departments would begin was weird, being fair to the user and ITS department alike.

## **Everyday Duties**

The duties were often monotonous, creating and managing tickets from users through different channels, either in person, online, or over the phone. My role was crucial to the entire ITS department as the ITS Help Desk intakes tickets from multiple mediums to resolve or assign them to the correct team. We were the initial point of contact with users at the university; if someone had an IT problem, they came to us. Every day was typically the same regarding duties. However, the types of tickets are where the variety comes in. As the volume and variety of tickets have increased, especially with the VHS merger and school year, time management has become more critical than ever. Throughout my internship, I've also learned to adapt my communication style based on the assumed technical expertise of the person I'm helping. At least for me personally, the idea of never judging a book by its cover has never been more prevalent than here. It has been a different change of pace in trying to present complex concepts in a simplified and accessible manner for those unfamiliar with more technical subjects. However, in my quest to strive for accessibility, some more technically inclined users have taken offense to assuming they are unfamiliar with the systems. It is difficult to get an initial judgment. Each conversation is unique, and the ability to appropriately triage and delegate your time is an essential skill that improves problem-solving efficiency.

Over time, and more recently, ODU/EVMS has been targeted with increasingly sophisticated phishing emails. This has led to a lot of time at the help desk being allocated to password resets, a workforce that could be used for more complicated tasks. ODU has finally started to address the issue as these attacks rage on. Specifically, the ITS Help Desk plans to implement a process with IT Security to identify and contain these issues and assist users with the fallout of these encounters. IT Security has also begun to create 'fake' phishing email campaigns to enroll users in mandatory cybersecurity training courses. Any user who clicks the 'phishing' link in the email is enrolled in the training. These are being implemented to mitigate these attacks, whether successful or not. Most notable in these attacks is how malicious users circumvent existing protective measures, like denying external emails with Outlook's filters. In recent attacks, users were able to get a foreign government email as well as a '@\*\*\*.edu' email to send emails through our filters. Throughout my time, I've been able to assist our phishing team with IT security, creating a database of emails and mitigating risks from compromised user accounts.

## **Was I Prepared?**

I started this paper by highlighting how I had no idea what I was getting into; however, I was prepared. Now, it may not be the answer you were looking for, and it wasn't ODU who prepared me. I was still a first-semester freshman at the university when I applied for this position. It was primarily my experience at the Advanced Technology Center (ATC) at Tidewater Community College (TCC) while still in high school. This two-year program helped me obtain both my CompTIA Network+ and Security+ certifications.

After this, I feel like I've pretty much stagnated. I was initially doing the Cyber Operations B.S.; however, due to a math requirement, I changed to the Cybersecurity B.S. My point is that the specific requirements and schedules I've had so far have hindered my further studies in the cybersecurity field. I've found myself with less time consumed by repetitive subject matter at ODU, which is typically only hosted virtually, even to on-campus students.

Honestly, not much in a curriculum could've prepared me for this specific internship. There was no part of the ODU curriculum I've experienced so far that could've prepared me for the soft and critical thinking skills required. Other than in my criminology class, we have not discussed one-on-one interactions with individuals nor evaluated a situation based on an individual's technical experience. This internship primarily deals with people and their experiences, correcting their behavior or the technology/service they use rather than technical expertise and utilizing existing procedures, policies, and internal knowledge bases. Being a cybersecurity student at ODU has increased my efficiency and problem recognition, leading to faster resolution times. I was familiar with many technologies and services I otherwise would've been clueless about. For example, the COVA CCI environment the cybersecurity program uses was more familiar to me than some of my colleagues.

## Objectives (Follow-Up)

Reflecting on my time, I realize that all my original objectives for this internship were met. These broad topics were covered extensively throughout my internship. My ITS Help Desk experience has been challenging and rewarding, leading to significant personal and professional growth.

In almost every entry submitted, I tried to underline how, almost every shift, I was interacting with some new technology or interface I previously did not know about. The EVMS-ODU merger further exacerbated this. The ever-evolving enterprise environment has kept me on my toes, continually pushing me to expand my knowledge and adapt to new systems. Familiarity with the procedures, systems, and tools has allowed me to respond more quickly and effectively to incoming tickets. The sheer number of systems and applications I've encountered within an enterprise environment continues to surprise me. I've made it a point to deepen my knowledge of the systems we support, whether through formal training or personal research. Personal research can include scouring the previously mentioned knowledge base, asking individual users questions about their resolution, or using a simple Google search. Apart from our formal knowledge base, I've started to develop my notes, compiling them into a small unofficial guide for some niche issues. In addition to this, I can create personal templates and modify them as time changes throughout my employment that may have not been previously developed.

Similarly to the software, some new personality or technical expertise influenced interactions with users creating tickets. Patience and empathy have been crucial when dealing with customers with varying technical expertise, adding an intriguing human element to the traditionally impersonal world of IT. It has been a different change of pace in trying to present complex concepts in a simplified and accessible manner for those unfamiliar with more technical subjects. In the early stages, I often over-explained technical concepts to individuals already in IT, leading to frustration. However, with time, I've learned to read the user's technical level early in the conversation. For less experienced users, I explain processes in simple terms, using analogies when necessary, while for more knowledgeable users, I focus on quickly addressing their issues without unnecessary explanations. These new approaches to troubleshooting have allowed me to maintain focus while ensuring that critical issues are addressed promptly, improving the efficiency of my interactions and enhancing my customer service skills, which has made every interaction more positive and productive.

The variety of software and users has led to countless situations. The ability to triage these incidents to maintain efficacy at the ITS Help Desk is vital. As I have developed a more robust proficiency in communication, I've created a system for prioritizing tickets based on urgency and complexity, improving my ability to quickly manage a high volume of requests. For instance, I've learned to quickly assess whether a ticket can be resolved within a few minutes or if it requires further research; at that point, I can delegate an appropriate time to address the ticket.



Ultimately, with basic problem-solving skills and the ability to learn from mistakes, thriving in an ever-evolving enterprise environment is possible. Throughout my internship, I've realized that the most effective IT professionals approach each challenge with a mindset of adaptability and resilience. Problem-solving has been at the core of every ticket I've addressed, whether it's troubleshooting a technical issue, navigating a new software application, or managing a frustrated user. What I've learned is that problem-solving in IT is rarely linear. It involves a lot of trial and error, and sometimes, the best solution is not immediately apparent. This iterative process of trial and error, paired with feedback from colleagues and users, has accelerated my development and helped me build a deeper understanding of my role's technical and interpersonal aspects.

## **Personal Feelings**

The best aspect of this internship is earning technical experience simultaneously with my formal education. This dual approach has been an invaluable opportunity, as it bridges the gap between classroom theory and real-world application. It can often be frustrating to come across job listings that demand experience from candidates still early in their careers. The experience gained during this time enabled me to build a practical understanding of complex concepts I encountered in my studies, strengthening my academic performance and confidence in the workplace. It also helps me see firsthand how crucial hands-on experience is, something that traditional education alone might not be able to provide.

At first, I assumed that the most challenging part of the internship would be dealing with demanding or frustrated users. However, I quickly realized that the real challenge lay in the disconnect that often occurs between the user and the support team. Users may only sometimes have the technical knowledge to explain their issues clearly, leading to miscommunications. Sometimes, their frustration with the problem is compounded by their inability to articulate what's going wrong, making troubleshooting even harder. I've had to learn how to manage these moments of miscommunication with patience and empathy. Instead of becoming frustrated, I've had to focus on asking the right questions and guiding the user through a more straightforward explanation of the problem.

Maintaining professionalism while trying to connect with users personally was a balancing act that I hadn't fully anticipated. While it's important to remain respectful and professional, expressing personality or friendliness can help build rapport with users, making them feel more comfortable. However, there were instances where emotions like annoyance or frustration—often triggered by long conversations or complex technical issues—started to influence my tone or behavior. I realized that while emotions are natural, they can unintentionally undermine the professionalism I was aiming for. Finding the right balance has been a learning curve, but I've improved at catching myself before my emotions impact my work. This has been an essential lesson in emotional regulation, as it directly affects how users

perceive and interact with me. It's made me more aware of how my emotional state can influence my performance and the overall customer experience.

## **Recommendations**

Not much preparation can be done regarding this job's personal aspect and interaction with users. Every user, problem, and interaction will have individual quirks, resulting in unique elements to learn from. Keeping an open mind and practicing patience are my biggest tips. One thing that needs to be clear is that only some interactions will end positively. In this position, you will only deal with users having a problem.

Unfortunately, if we were to follow the trends created this year, there would also not be much technical preparation that could be done. The services and systems the university supports, and hosts are constantly changing or being moved to different locations. However, there is one ray of hope. The ServiceNow knowledge base will become your best friend. The full-time staff puts great effort into ensuring the knowledge base is constantly updated and reflects current practices. In addition, every ticket that has ever been submitted can also be used as a reference when resolving issues. These internal resources can help identify the appropriate team within ITS that handles the software or service or the correct resolution for the problem.

## **Professional Interview**

Interviewee: Eddie Figueroa

Interviewer: Galen Cole

Eddie Figueroa is a full-time hourly employee at the ITS Help Desk.

Q: What do you think about the cybersecurity job market today?

A: "I think at one point, cybersecurity was expanding at a rapid pace, but now I feel like there are so many professionals in that field that it's starting to become a shortage of jobs."

Q: Do you see a future following the path you're currently on?

A: "Yes, as I expand my knowledge in my field, the possibilities are endless due to the fact that this field has so many areas to grow in. From hardware to software technology, it is constantly changing."

Q: What goals, if any, have you set for yourself working here?

A: "I've only set short-term goals so far. One goal was to move up within the department I'm currently in, which I've already completed. My next goal is to complete my certifications just so I can move up further in my field."

Q: How was your training when you were onboarded? Would you change anything about it?

A: "The training was simple and straight to the point. The only thing I would have changed was letting us be more hands-on sooner in the training."

Q: What do you think about the work environment: what do you think about structure, workplace, benefits, bosses, etc.?

A: "The work environment is awesome. I couldn't ask for a better place to work. My supervisor is extremely cool. The benefits take a lot from your check, but it's better to have it and not need it than to need it and not have it."

Q: Were you an ODU student before this?

A: "No." - Too bad, we missed out on a couple questions

Q: What specific skills or knowledge about cybersecurity in particular benefit you at this job?

A: "Believe it or not, but customer service benefits me more. When you know how to communicate with people or empathize, you can de-escalate a lot of problems just by actively listening to someone and empathizing as you find a solution. You tend to build better rapport that way which all in all makes the day less stressful."

Q: What are the most motivating or exciting aspects of your job?

A: "The motivation is seeing the student employees graduate and move on to bigger and better careers, the excitement comes from the different events my job sends me to, I get to network and meet new people everyday, I learn new things everyday."

Q: What is the most discouraging?

A: "That would be when we get behind on work, conducting a merger with a different company and have to put in place new policies and procedures and change up everything we currently had in place."

Q: What is the most challenging?

A: "Having to forget old policies and procedures and put in place the new ones. It can be confusing at first."

Q: What would you tell people who want your position? What tips would you give them?

A: "Take your time, pay attention to all the minor details, and be resourceful."

Q: Previously I mentioned goals, how have you worked to accomplish these goals? As you accomplish goals how do you go about creating new ones?

A: "No answer."

Eddie Figueroa's insights during our professional interview emphasized the importance of customer service in IT, even in technical roles like cybersecurity. He highlighted how communication and empathy can resolve conflicts and build stronger user relationships. These qualities proved essential during my internship. Eddie's experience with organizational changes and new policies mirrored my challenges with the EVMS-ODU merger. This reinforced the need for resilience and flexibility in a dynamic IT environment. His advice to "pay attention to minor details and be resourceful" aligned with my approach to complex tickets and using the knowledge base effectively. Finally, his enthusiasm for continuous learning and networking resonates with my goals. It inspires me to explore new areas in cybersecurity while valuing adaptability and growth in my career path.

## **Conclusion**

Throughout my time so far, I've had to create and manage tickets from users, making them in person, online, or over the phone. Each day was either unique or a learning experience. When I was first released to manage tickets independently, I was intimidated; however, my confidence grew the more problems I faced. As my knowledge of systems grew, I could better diagnose, troubleshoot, and resolve incidents. Transitioning from a phase of simply learning the ropes to achieving a level of proficiency has empowered me to tackle complex issues with confidence. This experience has taught me not to worry about a problem I may be unfamiliar with but to embrace the unfamiliar and learn from experiences to apply those lessons learned.

I don't believe this internship has had much influence on my remaining college time or professional path. It has allowed me to view some of the many responsibilities of a blue team in enterprise cybersecurity. However, I still have no idea what cybersecurity path I want to commit myself to. I have yet to experience any red-teaming opportunities. Being able to experience both worlds would allow me to understand the full spectrum of cybersecurity roles better and help me determine where my interests and strengths align most effectively. While the blue team focus has provided valuable insight into defending and securing systems, I am also curious about the offensive side of cybersecurity—how vulnerabilities are exploited and how attackers think and operate. That said, this internship has been an important stepping stone in my exploration of the cybersecurity field. It has confirmed my passion for the field and helped me recognize the areas where I still have room to grow. While I may not have discovered my exact path yet, I now feel more equipped to dive deeper into different facets of cybersecurity as I continue my studies and look for future opportunities. As Eddie Figueroa emphasized during our interview, continuous learning and adaptability are vital in IT. These qualities, cultivated during my internship, will guide me as I navigate my career in cybersecurity. My future seems bright, and I hope to find a career in the current market, with a zero percent unemployment rate (Old Dominion University, 2024).

## **Works Cited**

Old Dominion University. (2024). *School of Cybersecurity*. Old Dominion University.  
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