Cyber Clinic Reflection Paper

Introduction

The Cyber clinic was one of the many opportunities that I had the chance to embark on throughout the Spring 2025 semester. This internship opportunity allowed me the chance of being able to gain real hands-on experience in the field of cybersecurity, through collaboration with fellow peers in the position of being a cyber risk intern. Throughout the process of being a cyber risk management intern, there are many various strategies that were used throughout the conclusion of the internship, that benefited me. And there were strategies that caused me problems, in allowing me to successfully work with my clients. This reflection paper will look to cover all aspects of the internship through the positives and the negatives of the internship experience, what I seen to be very valuable throughout the duration of the internship, and what are some strategies I would want to see conducted for future cyber clinic interns.

What went right during the Cyber Clinic

Throughout the duration of the Cyber Clinic, there were various characteristics that went well, when it came to me improving the overall awareness of the field cybersecurity for my client, who was unaware of the dangers of the digital realm. However, this process could not have been done alone, if it were not with the help of my group. Through working with my client, there were many barriers that occurred, which caused significant issues when conducting the final report and aligning with the clients cybersecurity goals. Furthermore, this caused my group to panic at first, since we were not originally given many valuable sources, which we could have used to our advantage, when conducting research on our client and their industry. However, this worked to my group's advantage, since it allowed us to communicate more effectively and understand what parts of the research one individual was going to conduct on the business over

another. Throughout our collaboration we worked to aid one another, in guidance and giving feedback, in ways of improvement, which really helped to really make our report stand out. Which is very crucial in my opinion since, in a team environment, the whole group must be on the same page throughout the duration of the cyber clinic to succeed. When it comes to the skills which I have gained throughout this experience, there are many in which I can use for furthering myself as a cybersecurity professional. This includes skills in developing design thinking and empathy, when it comes to working with a small business, which is crucial since you must come at a small business in a different perspective, since they are unaware of the dangers of the cybersecurity realm can cause on their business. This skill was crucially developed, in working with Mr. Bakai throughout the duration of one week in the internship, in which he helped us to establish a major outlook of approaching our business, from a technical perspective in which they can understand, and one that does not confuse them. However, this was not the only skill I developed throughout the duration of the internship, I also developed many skills in network defensive security measures such as VPNS, data storage mechanisms, and even the importance of access control, throughout the duration of my research, which is crucial in my cybersecurity journey overall to understand. The incorporation of these security measures overall allowed me to conduct a better understanding of my clients' needs, and allowed me to think about the field of cybersecurity from a interdisciplinary perspective. The last thing that I look to highlight on throughout the duration of the internship, that really aided me would be the incorporation of the cybersecurity framework CSF 2.0 and the CISA CPGS. These crucial frameworks allowed me to guide my business to better understand the best cybersecurity practices, and establishing a building block for building their cybersecurity hygiene strategies, for a digital realm that continues to advance. Overall, the incorporation of many of the skills that I have learned,

throughout the duration of the internship, has allowed me to develop my cybersecurity skills from many different perspectives.

What went wrong during the Cyber Clinic

Throughout the duration of the internship, there were not many things in my opinion that went wrong, however there are some areas that need to be improved. One of these areas of improvement needs to be the scheduling in which assignments are handed out. I feel that during the internship, the way in which assignments where handed out, such as reflection papers, cyber template paper, and even the team reflections. Where all around the same month, in which I feel needs to be changed, since students have many courses that they are taking upon the internship, in which they need to put time into their courses as well. This caused chaos since the deadlines for these assignments, where all relatively on the same week for some of them. However, if we worked on much bigger assignments, such as the cybersecurity final template months in advance, our group would have developed a further in-depth solution for a client that met their needs fully. The next area that I feel needs improvement would be the shortening of the time we go out to other businesses, to conduct risk assessments, with VALOR. While this was very crucial, in developing are cyber risk assessment approach, this however took a lot of time away from developing are cyber risk assessment on our own business we worked with during the 15-week period. Since we were too focused on conducting risk assessments on other businesses. Overall, there were not many things in my opinion that went wrong during the duration of the internship, besides these areas of improvement.

Lessons Learned during the Cyber Clinic

There are many lessons which I have learned from this amazing experience, this includes always asking questions when you are uncertain about an assignment or even a certain topic. The people that are put into this experience are there to guide you, so use them to your advantage on furthering your cyber security capabilities. The second lesson learned would be to be adaptable to your business' needs, this is crucial in my opinion since many businesses that are from different industries in which you work with, so the threats that they are dealing with are much different in another industry. The last lesson would be to have good team chemistry when working with your group overall in developing solutions for your client. This allows you to think as one, in coming up with innovative solutions for your client.

What could be done differently if I could Redo Cyber Clinic

When it comes to if I had the chance to redo this internship, there are some aspects in which I would have done differently for the overall outcome of my internship experience. This includes conducting more research on my client's industry and looking at the most crucial cybersecurity vulnerabilities that are normally exploited by attackers. This would have allowed me to center these vulnerabilities around my client's business and build around them various measures of defensive cybersecurity. Other characteristics in which I would have done differently would be working on my cyber template final paper, as early as possible with my group, since it allows use to add more knowledge overall and conduct a better overall conclusion to address cybersecurity issues faced by client business. The final characteristic I would have done differently would be conducting more public speaking mechanisms, when displaying the work I have conducted, throughout the experience. This was due to me being very nervous about presenting my findings even though I was fully aware of topics I was displaying.

Memorandum of Agreement objectives met

Throughout the duration of the internship, I would say that all the memorandum of agreement objectives were met. This includes the practical application of classroom knowledge, collaboration and communication in a team environment, exposure to cyber threat intelligence, understanding of or clients' industries' best practices, and even researching innovation cybersecurity solutions. When it comes to the practical application of classroom knowledge, Professor Duvall, and our TA lee, did a amazing job at clearing up any confusion that I had inquired throughout the internship experience, they allowed me to understand industry key frameworks that I could use to my advantage. When it comes to collaboration and communication in a team environment, my team and I worked very well together, building off each other's weaknesses and strengths, to help conduct our risk assessment for our client. This included conducting cyber threat intelligence of the industry our client worked in , and coming up with innovative solutions to the issue that arise in our assessment.

Most exciting aspect of the Cyber Clinic and most challenging

When it comes to the exciting aspects of the Cyber Clinic, it would have to be working in a team environment. The reason that this was so important to me is that it allowed me to understand the importance of collaborating with other fellow peers on important topics of cybersecurity. This relates to real world experience in the cybersecurity realm, since that is what you will be doing is working with others, on various cybersecurity issues. When it comes to the most challenging aspect of the cyber-Clinic, it would have to be putting so much work into your client's cybersecurity issues, and for them to not even show up. This was very frustrating for my team since we were so discouraged about how much work we had put into our project and for clients

to not show up on briefing day. This made us feel that our clients did not really care about our research and the goods we brought to their business.

Recommendations for Future Cyber Clinic Interns

When it comes to the future recommendations that I have, for future interns of the cyber clinic. They would be to form a good bond with your peers overall throughout the clinic, even if they are in your group or not. The reason being is that it allows you to build valuable relationships outside of the classroom environment and into your main network, and they can aid you with valuable sources for conducting your research. The second recommendation that I would have for future cyber interns is to understand a lot of industry vulnerabilities, from a variety of different sectors. This allows you to relate to the client business you work with, and the vulnerabilities that they could deal with within the work industry. The third recommendation would be, to get working on their cyber template paper as soon as possible, since the deadline will come up faster then they could have expected.

Conclusion

In conclusion, the cyber clinic has been opportunity like none other throughout my academic career. This internship has given me the opportunity, to be able to gain real world hands-on experience within a cyber risk management position, which is a crucial position within the digital realm. Throughout the collaboration with my fellow peers, I was able to create innovative solutions for problems that most businesses face within the digital realm, especially small businesses that are unaware of the dangers of cybersecurity. The way in which the cyber clinic will influence the remainder of my college career at ODU, is that it allows me to see the cybersecurity field from a interdisciplinary perspective, and the importance it holds in every

industry. The way in which the cyber clinic has influenced my professional career, is that it has allowed me to understand the importance of creating a network with others, in solving cybersecurity issues faced within the digital realm, through creating innovative solutions. The one thing which I hope to see changed within the course, is creating a schedule for assignments, that are more flexible ,then they where this spring semester.