

Mail Data Specialist Analysis

Project and Reflection

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CYSE368 Internship

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Table of Contents

- 1. Introduction**
- 2. Management Environment and Structure**
- 3. Work Duties and Projects**
- 4. Use of Cybersecurity Skills and Knowledge**
- 5. Academic Preparation and Connections**
- 6. Fulfillment of Internship Objectives**
- 7. Most Exciting Aspects**
- 8. Most Discouraging Aspects**
- 9. Most Challenging Aspects**
- 10. Recommendations for Future Interns**
- 11. Conclusion**
- 12. References**

1. Introduction

Why I Chose Preferred Direct for My Internship

Due to my financial circumstances while attending Old Dominion University, I did not have the luxury of pursuing my undergraduate degree without working a full-time job. Paying my own rent, bills, and other expenses, I am on my way to establish myself financially independent. I have been with Preferred Direct for almost 2 years. Prior to this I had a normal job in retail like most peers my age. Although I was making a decent amount of money, I was ultimately not satisfied which led to my resignation, and it was a miracle I was able to land a job here working at Preferred Direct through a temporary staffing agency. Another miracle was when I had the realization that my position as a Mail Data Specialist and Analysis corresponds with my field of study. As a company specializing in direct mail and printing, I saw this as an opportunity to gain experience in cybersecurity practices in the real world outside of the typical tech community.

As a well-established family since 1987, I knew from the get-go the work culture would be different than just a plain corporate company. The business itself is well known for its secure, and technology-focused approach to print and mail solutions. Right from the get-go I knew that the practices we follow to ensure the data is safety follows strict rules, regulations, and compliance. From my experience working here I have seen how the company manages data protection and compliance such as HIPPA while delivering services to our clients.

Before choosing Preferred Direct as my internship, I decided to make a few learning objectives that I aimed to achieve. **1. Learning Compliance Standards:** I studying to become a GRC analysis so that being said I needed to learn how compliance frameworks such as HIPPA, HITRUST, and SOC2 guidelines how the business performs. **2. How Cybersecurity is Applied into the Business Environment:** I wanted to understand and apply what I have learned at my courses at ODU and use them in the real world to safeguard systems and data protection. **3. Developing IT skills:** I knew from the start my position is above the general IT helpdesk, obtaining as much knowledge as possible will give me the upper hand later down the line. I improved my IT practices from hands on experiences through Software, and even some machinery.

2. Management Environment and Structure

Here at Preferred Direct Marketing Services the company is structured with a simple chain of command systems. The company itself is a midsized company with around one hundred employees with a main front office staff that houses an administration, data, and graphics team. While the back end of the building houses our production

team. On the first day it is required to tour the whole building to get a general sense of the machines and what they do. For company our size we do not have our own IT department. Here at Preferred I signed a contract with a local IT support company called HRCT. They handle the backend with data bases and server management. Although, they do most of the internal works for our system that has slowly been changing as I have taken a lot of tasks and roles in the IT. Basically in the front office other staff will come to me if they need help troubleshooting software, or hardware issues. HRCT can only do so much because they have their own offices, and we have to put in a support ticket to send someone out.

In terms of how general structure is at Preferred Direct there are a few distinct teams for key functions. These include Data, Mail, and Administrative for the front end. The back where production lies how many more key roles. Sorters, sheeters, folders, and those assigned to operate on our two main machines, the HP and Cannon printers. Production operates on a different scale as there is another supervisor assigned to the back end. However, in the front where I work, people are technically assigned certain roles but those end to overlap as there are new things being taught and shared around. The front office itself really is only around twenty people when you include graphics. I generally interaction with everyone on a daily basis which helps workflow and boost morale, even during higher intensity workloads. Supervision I would say is supported and very mentor oriented. Every morning there is a meeting to discuss the goals, current jobs being on worked, and any improvements. These meetings are critical to ensure everyone is communicating.

Our CEO, Bill Nee, also has what he calls an open-door policy. This means he will get himself involved by checking on staff and help out anywhere he can when needed. Bill is a real CEO in fact he is actually helping pay for this upcoming semester of college because he knows how chaotic my world has been recently and he **apricates** the effort I try to put in for work and school.

Overall, the management environment is remarkably effective for work and internship level experience because it's clear guidelines of what work you will be doing but also allowing the flexibility to work to explore and learn. I enjoy that I can comfortably approach my managers, and even my CEO just have a brief chat about work or even matters outside work. It's a fantastic opportunity to be work here, and actually be seen and praised for the hard work that you put in.

3. Management Environment and Structure

During my time at Preferred Direct I was involved in countless varieties of work duties, assignments, and projects that have allow me to apply my background in cybersecurity to my operating when completing my tasks. Below are the three major

clients we work with and how and what I do by applying my cybersecurity knowledge:

- Anthem: Here at Preferred Direct our largest company is Anthem. We handle a large portion of the mailings for all 14 Anthem health-based states. I run the mailing lists that contain PHI data (Protected Health Information). This information is sent over through our encrypted FTP channels and then must be processed through an application called BCC Mail Manager. While working with PHI data it is important I follow the safety policies and compliances that are set by law and Anthem themselves. Recently there was a mistake with one of the data types and it almost caused our company to be fined \$100k. Anthem is quite large and because of there are several different types of mailings such as, bills, reminders, postcards, and yes spam too. What makes it more complicated is when looking at a deeper level, there's several types of papers, design, formats, and even envelope type. Not to mention the quantity of one job task is at least two million mailings. That's why it is important that you follow the compliance steps to ensure the data is accurate and secure.
- Patient News a Canadian based company and is our second largest client who we work. If you have ever been to the dentist's or doctors' office have seen the stacks of flyers for information guides, there is a very high chance my company was the one who printed that information. Patient News follows many of the same steps as running Anthem jobs. There are postcards, mailing letters, and variable data that may contain sensitive PHI data.
- Lastly our third largest company is Xcel Media Group based in Florida. They are handling data from Car Dealerships. Now when talking about Anthem and Patient News generally throughout the month there are set days when certain works will be sent over by client. This gives us organization and space to separate and plan out our workflows. Xcel on the other side is our wildcard. Xcel works with the dealerships and those dealerships factors in economic conditions of the customer, seasonal, and holiday output. For me Xcel is mostly PII, so instead of health data this mostly consists of addresses, car payments, apr rates, or any recent changes with upcoming cars.
- Aside from our clients the primary tools I use are BCC Mail Manager Software. This tool is essential for processing, verifying and uploading mail jobs. For our big three clients this helps streamline the process by removing data from the dupes on the spreadsheets, correcting the address formats, and ensures the data remains correct under USPS mailing regulations. This software is also used for production as the Presort setting adjusts the paper type, size, amount, and other administrative data such as postage, qualification reports, Maildat exports.

- PostalOne is another big software piece I use in my job daily. This database is managed by USPS and is the secure site where I upload the Maildat exports after running the job. The files are run through a verification process before funds are processed between the company and client. The workflow isn't only about mailing coordination; there are a lot of cybersecurity elements here. Keep in mind the maildat houses the postage statements, transfer forms, zips, and facility locations. The last maildat I received today was for Patient News and the amount was around ninety thousand dollars. With that being said the postage is something you cannot really mess around with because that is a lot of money moving around between accounts. Another way this tie into cybersecurity is that every file contains a MID/CRID ID that is logged into the USPS database. These logs are used for audit trailing to ensure nonrepudiation.

Even though what I'm doing isn't traditionally what you think about when you hear cybersecurity it is still just as important. It is not just about firewalls and virus protection; cybersecurity serves as a strong backbone to the globalized data world we live in today. It is about how companies our mine handle, protect, and process critical data in a way that is secure and traceable. I will have to admit learning about BCC and the ins and out of the USPS system, it's pretty crazy how all these mailings and the protocols set in place work.

4. Use of Cybersecurity Skills and Knowledge

Choosing my job for my internship has been one of the best choices I have made. Before this job and internship course, I was learning the foundations of network security, basic scripting, and security policies from my course work at ODU. There is only so much you learn though and actually being present to do hands on work has been more effective to me. Although I am actively doing school and working full time, I believe doing so provides a unique experience where things I am learning fresh from my coursework can be applied to work and vice versa. As I take on newer things like our SQL Database for merging, also known as Uluro, I will get to practice up on my coding skills. It was quite satisfying to see the theoretical knowledge of cybersecurity foundations can actually make a difference at my workplace.

At the same I had to learn many new skills on the job. The courses I've taken at Old Dominion offer a great pool of information but that's all, it is simply a broad pool for information. I didn't know too much about compliance regulations like HIPPA and HITRUST CSF until I started working at Preferred Direct. My manager explained to me that we use HITRUST as a way to benchmark and track our performances with keeping within compliance regulations. Furthermore, with a lot of work orders run through BCC and USPS PostalOne we use a SIEM system

(Security Information and Event Manager, to log and audit each action done but each person. This serves a checkpoint for the front office to ensure the data integrity is sufficient and there are no mistakes before it arrives at production.

Personality I will admit at first, I did not think what I did qualify for anything cybersecurity related. After speaking with my advisor, I was told this is exactly what the GRC analyst (Governance, Regulation, and Compliance) field entails. As for me, who wants to move to a larger metro area in the Northeast, large sectors in Healthcare, Insurance, and Government all need GRCs analysis. Even in school there is only so much that can be taught. Most lab experiments I have had in my courses only have a clear-cut goal and no room for expansion. From my experience it has been more on setting up servers, or light hacking. I came to realize that actually working in the field encompasses it so much more when it comes to cybersecurity.

Another viewpoint that has changed how people see security as simply just technology. You have the best computer, firewalls, routers, but none of that actually means anything if the data is being mishandled. It is on the associate as well to stay up to date with protocols and safety guidelines. If not, this can lead to major events like phishing acts or trojan horses which then compromise the whole business. It's important that cybersecurity includes teaching people to build a sense of security to better protect our systems. I'd say overall I very much like what I do, and I see myself continually learning with the constantly changing field of cybersecurity.

5. Academic Preparation and Connections

My coursework at Old Dominion University definitely came into play by creating a foundation of cybersecurity knowledge for this job. Although I have had to extend into many more topics that weren't covered, having to type out each reflection for this course has made me really put two and two together and cohesively make connections between work and school.

At Old Dominion one of the courses I was required to take towards my degree is CYSE 301 (cybersecurity Techniques and Operations). This course gave me the resources and knowledge to learn how to map networks, analyze data traffic, and configuring the access point systems on our computers at work. This is important because BCC must be properly configured for each job and each client has a specific need. I was able to use the knowledge from this course to troubleshoot any issues I have had if a maildat fails, and we would have to manually figure out the code to see where the issue is. The job is still doable without the knowledge from this course, but it would be harder to operate tools and software without some general background knowledge prior. And this company has mass prints, merges data, and designs, time is money.

Additionally, the cybersecurity program at Old Dominion I believe is quite excellent for the area. The program encompasses a wide variety of technical, managerial, and ethical foundations which have helped me look at work in a different but positive light. Old Dominion Cybersecurity is also recognized by NSA as

its top-class cybersecurity programs, giving the University some much needed prestige and window guidance to a generally newer field compared to Computer Science or Information technology. I personally have a much better understanding of why we have policies and compliance in place to protect data.

6. Fulfillment of Internship Objectives

In the introduction I have outlined the three key objectives I wanted to achieve on the course of this internship course. Here I will give a brief reflection upon those objectives. All 3 Objects I say were fulfilled, but there is always room for growth.

- **Learning Compliance Standards**

Working at Preferred Direct gave me more knowledge about industry compliance standards such as HIPPA, HITRUST, and SOC 2. I actively participated in reviewing the working under the HIPPA standard to ensure data integrity. With HITRUST I helped refine our products to allow a higher workflow during my work order runs. SOC 2 is particularly important for auditing. These compliances also help the company in the relations aspect of the business. New potential clients see we have all these ratings and certifications, they know they can trust the company.

- **How Cybersecurity is Applied to Business Environment**

To put it simply, every aspect of what I do entails some form of cybersecurity even if you don't realize it. The computer I use is encrypted with a blocker, heavy firewalls, and even down to our encrypted emails we use to speak with our clients. There is a lot of data constantly being transmitted between clients and us and then to USPS. It's not just a boring desk job, but you will only see that when you look at the bigger picture. To this day it utterly amazes me how much of my field of study plays into every aspect of what I do.

- **Developing IT Skills**

As of recently, I have gotten promoted to work more with other data merging tools such as Uluro. This is what our main data team uses where we merge data from graphics, and then to production. Coding is useful whereas there are so many different outcomes. One job alone can have around three hundred outcomes when factoring areas such as data fields, NCI info, IMB mail data, and graphics. Uluro lets us pull the variable data to merge and then export, track, and encrypt any documents to ensure compliance. So, think of what I do on the Mail Data team as step one and Data Merge as Step 2 a work order.

In summary I believe that the goals I have set for this course have been achieved. The goal will continue to grow has compliances, cyber threats, and technology is constantly changing.

7. Most Exciting Aspects of the Internship

There are a lot of good things I have to say about this company and my time here. The balance is perfect for someone like me who is finishing out college full time. Regarding the course content I would say the most exciting thing is being able to work on data hands on while it is data live. I love working with a team when we do our major projects for clients such as Patient News or even a new customer who wants to make 30k books about quotes, (yes that did happen). I'm the youngest person at 23 in the front office. The next youngest person is Kayla Fleenor, and she is the one who trained me. I've been told many times by coworkers and even the CEO that I bring peppy and good energy to the office. My strong work ethic is being seen, and I love taking the lead on projects. I recently hosted our company's first ever potluck at my apartment in Downtown Norfolk.

Learning as much as I can from my coworkers has always been a given mindset for me. I do believe work culture is allowed to be personal. I want to work in a place where I feel comfortable, but I am seen and supported in my work ethic. People are people, some jobs you only know their work side and that is all you will ever see. Better work culture equals better output and performance. Having connections on a deeper level than work I know will pay off later down the line. It's what makes us human and what makes life more enjoyable.

8. Most Discouraging Aspects of the Internship

While my time here has been overwhelming positive, there are few negatives that I have experienced. Steep Learning curves: I remember when I first started, I was give our SOP (standards of procedures) book. Well in a nutshell I can tell you that I have never used that book after day one, because there is just too much information to really understand what to do. Thankfully Kayla was there to show me, but from her and firsthand experiences from the other coworkers, a lot of them had to learn new things with no guide and just trial and error. That seems to be the case of start up and family companies from what I have gathered. Larger companies can streamline and achieve quicker outcomes.

Repetitive Tasks: This can be for any job. Since working here, I have done the same cycle processing work. Patient News comes in two large waves which are the first of the month and halfway. These mailings are in bulk, but the quality is generally around 300-500k mailing quantities. During the beginning of the month, I also receive Anthem Postcards to process and run. Without any organizational skills planning all this would be a logistical nightmare. With Xcels and other client mailings I generally do not handle those but there are times when I would need to step in to process and merge those mailings.

Lastly this one can make or break the reader, but the biggest drawback is pay and moving up the ladder. Because this is a smaller family company the work culture is nice, but since there are only around twenty people in the front office it does leave a lot of room to move up. The company's main goal is for everyone in the front office to learn each other's tasks but what generally end up happening is you end up specializing in a certain category

and that becomes your main priority. That's an issue when someone calls out and work has to be passed down to the next person. So, in my case it's the beginning of the month and I am currently processing Patient News. Postcards come in tomorrow so I can organize and prioritize between the two. My coworker calls out that I have to put aside what I'm doing or at least organize my plans. Keep in mind processing a singular job can take a minimum of 10 mins.

9. Most Challenging Aspects of the Internship

I am going to be honest since this is my final reflection, the work that I do here really isn't hard at all. Sometimes it's just a lot all at once which then leads to mistakes. It's always the fault of the employee though, like for example Xcel is constantly changing the data and expects us to be processing, print, and mail sometimes the day of the data being sent from them to us. I've noticed there are a lot of miscommunication issues between our front end and back production. This has recently cause large mistakes that have certainly cost the company a lot. Paying attention to detail rather than be in Midnight (where we create the work order) or just while processing and merging itself.

We recently had an issue with a maildat failing to validate through the USPS PostalOne system. It made an error I have never seen before, and our senior Mail Data Specialist called out. This was last Friday, and I was under a lot of stress from management to troubleshooting the issue because the mailing needs to be out by 4pm to the post office. I had to use USPS which then told me to call BCC because it was security issue. BCC support couldn't help so next I had to call HRCT for the firewall access. Once they granted me access, I had to call both BCC and USPS into a merged call to troubleshoot. I was lucky enough that both parties were present and had staff and understood what the situation was. There have been times in the past when BCC and USPS weren't able to provide us with same day support. Due to that we have made some of our past clients upset.

For me what is the hardest I would say is trying to balance work and school, which is doable, but I also want to have a social life. I'm constantly burnt out because I tend to overperform at work or I have external factors happening outside work and school.

10. Recommendations for Future Interns

For any student in a similar situation to school or company I would suggest just being open-minded about everything. For a field like cybersecurity brush up on basic IT skills compliances like HIPPA. Be proactive and ask questions if you have an inking of a question, you never know until you ask and you can learn something new. Work on communication skills with both writing such as emails, teams, text. This also applies to speaking of course. In the workforce you represent yourself, so you want to make yourself look good. Lastly, what is most important to me is to stay organized and flexible. This can entail having a clean workspace to a calendar or planner to map out your daily tasks. It makes you adaptable and easy to pivot from higher stressed times.

11. Conclusion

My man takes away take away from this time at Preferred Direct Marketing Services is acknowledging and applying my coursework to real world usage. This experience overall has helped me see a larger perspective of cybersecurity and my goals a GRC Analyst entail later down the line. Even in a commercial mailing and printing company it is very fascinating to see cybersecurity used in almost every aspect there is. I will continue to work here and expand the company culture and may even ask to form our own in-house IT department.

For the remainder of college, I will continue to use both work and school side by side as a reason to grow and learn more about my field. In a way my job is higher than the regular IT help desk that most people in my field start off in. Hopefully by graduation I will be able to move to a higher-level job with higher pay. I discovered with my analytical mind I enjoy the context of what governance, risk, and compliance have to offer and I do believe this is a job that will work alongside artificial intelligence in the long term. Furthermore, anything new I learn I will apply within my classes and vice versa at work.

Because of this job this has further solidified my enjoyment in my field. It's a stable, decent place, and seems like there is room for growth in this field. The GRC field is in demand but not the same way you see people who follow Computer Science or IT. Even within the cybersecurity field most of my peers want to be hackers or a mod kit developer. Granted I will admit GRC analysis does sound boring, but I do like boring work. It opens the door to something stable and long term. Another benefit of working at Preferred Direct is the social community that the office creates. I find myself actually enjoying going to work to talk and collaborate with my coworkers. It makes life more enjoyable; I sure hope my next steps up will lead to leadership opportunities. Ultimate my path here is shaped here from what I do but I view it as a solid foundation.

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