Group G Proposal

Man in the Middle Foundation

Non-Profit Social Mission

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CYSE 494 Entrepreneurship in Cybersecurity

Professor Porcher

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What is the problem you are addressing?

The problem we are addressing is the information sharing available to the cybersecurity industry not having the right resources to provide/allow students to be equipped in the degree field. Whether it be an internship job to get hands-on experience, a part time job, or a full-time job/career. Even though we are told as cybersecurity students that once we graduate, we will be able to get a job since we are needed everywhere and there's more than 30,000 open jobs in Virginia alone, students are still having issues knowing what exactly is valued in each company/business. The issue here is that there is a lot of conflicting information that is not updated and that is not applied to most employers in the private sector today. Many students are left confused and not sure what employers want to see from them regarding specific skillsets and experience.

The blame or fault is not put on anyone here but there is a communication barrier between employers and students with no sense of realistic expectations or qualifications the employers want to see in job applications/resumes for specific job positions. Some companies want to see that you have certain certifications and others don't, some companies want to know what specific skills you know how to do and can explain it step by step instead. Some companies want you to have some customer service skills to work at a help desk for internship entry level positions. Then there are other jobs that need to see you know how to work with Windows system and know the ins and outs of management and security. Colleges and universities need up to date information/resources to better guide these cybersecurity students towards the right path to getting their next job and easily be able to get hands-on experience to further their career and get that dream job they always wanted from the start of their education. But also, to know why they did not get the job they applied for once denied is necessary for growth so that they can have some direction on where to go next to learn the skillset that is needed for that job, so they don't lose hope.

How do you know it's a problem?

We know this is a problem because there is a global shortage of cybersecurity workers in the field and still persists today. Cybersecurity Ventures shows there are more than 700,000 unfilled cybersecurity jobs in the United States and are in high demand (Lake, 2022). From personal experience in trying to get an internship job is difficult and from hearing other students experiences with attempting to get hands-on work with a company whether it be for an IT, IS, cybersecurity job, etc. There are guidance/success services/resources available to this regard, but either students don't know where to find them at their fingertips or they are not certain if any of them will be valuable to most employers because they are clueless on what they expect from students/grad students that have just graduated or are close to graduating. Students are told one thing from one source and then are told something different from the private industry and we want to make it transparent between the two segments and bridge that gap to ease frustration.

Colleges and universities help a lot in general in terms of preparing students of what the field is all about but doesn't cover everything in terms of what employers want from us specifically that is personally customed to what job title they want to pursue and what interests them. They would benefit from 3rd party and outside consultation sources to improve their student success services. We also know this is a problem because there are companies that offer specific training for the job, but others expect to see it on your resume with at least a year's experience in that aspect, so no two companies are the same in that nature. The current

employment issue with cybersecurity students presents barriers to entry level positions that are difficult to begin with if no basic IT experience is listed for employers to see. Once applicants are denied the position, they don't get an explanation on why and what they were missing or what they were looking for in the first place. Once again, these students are left confused but now frustrated/upset that they still have no idea or direction on where they should go next to better themselves and or improve on.

What are we going to do about the problem?

We are going to be providing consultation to the educational resources that are already available to the students right now by creating an app to reach the students and act as a man-in-the-middle to bridge this gap between students and employers by providing consultation to every customer segment that is involved. In this process, we will streamline and make it easier for everyone involved. Enough wasting time on filing out useless applications and wondering what employers really want from you as an employee while also making it easier for the private industry as well so they don't have to keep looking through and denying applications because the skillsets don't match up to the job title. We will use updated consultation research that is industry-backed to improve the system that is being used today. By acting as an information broker, we will be able to improve information sharing at all segments. Overtime this could improve the cybersecurity curriculum at the college and university levels and that information from resources provided can easily be accustomed to students in the degree field.

Filtering out old information and credentials that is not useful for most employers today will make it a lot easier for students to focus on what is actually desired from the private sector when looking for jobs in the degree field. Creating an application for colleges and universities to use to help assist cybersecurity students with the right guidance and direction towards success in landing a job with the right/expected skills is the solution. For example, if the student needs to know a certain programming language that they want to obtain for a job position they are interested in, we will provide them with the best website/program to learn it from. This will be done with data from more in-depth strategies and resources that the industry is calling on and is requiring.

What barriers do you expect to confront?

Barriers we expect to meet deal with already established programs and organizations that have similar goals and desires, but the difference is that most of those programs are dealing with different customer segments and not specifically unemployed cyber security students in general. Expecting behavioral barriers from clients, student engagement barriers and barriers with funding along with social media marketing for the applications are all examples of obstacles that could be confronted along the way. Federal organizations that are in collaboration already with other projects will be one of those obstacles. Information barriers with employers that deal with trade secrets are on the list of things to expect while on this entrepreneurial journey. CompTIA certification market position is another barrier we will expect to confront to assess how other employers require it or which ones specifically are valuable the most for certain job positions.

How will you know if you are successful?

By providing updated resources/information from employer trade secrets we will achieve lower unemployment rate for cybersecurity jobs and combat the global shortage of workers in

the field. By serving as a collaborative middleman, we intend to achieve higher levels of information sharing, better quality of education services, higher levels of employment accuracy by engaging with employers/colleges/students and enabling a clear pathway to provide better opportunities for a successful entry into the cybersecurity industry.

We will know how successful the application is by job metrics, student feedback on how well the skillset resources was acquired, participant reviews, student engagement, and the actual impact we will see with cybersecurity students being able to easily find the resources to obtain those skillsets and get the job they want. With a Social Cost Benefit Analysis (SCBA) we can test how successful we are compared to the services that are available to students now at the educational level.

References

Lake, S. (2022, October 20). The cybersecurity industry is short 3.4 million workers—that's good news for cyber wages. *Fortune*. Retrieved May 28, 2023, from https://fortune.com/education/articles/the-cybersecurity-industry-is-short-3-4-million-workers-thats-good-news-for-cyber-wages/