CYBER SECURITY

Cyber Security; as its core definition, is the practice of defending computers, servers, mobile devices, electronic systems, networks, and data from malicious attacks. In other words, an information technology security or electronic information security which terms applied in various other context such as from business to mobile computing. Regarding the highest level of general development of this new technology, one of its many usage is heavily known for Network Security; a process of protecting the network from any unwanted intruders, whether that be targeted users or opportunistic intrusions and malware. Secondly, Application Security which mainly focuses on constant updates and testing in order to ensure safety to these programs, along with keeping these software and devices free of threats. Third, Information Security; the act of securing the integrity together with privacy of one’s data, either in storage or in transit, especially data in inside of networks and application whilst also sheltering company and customer information in a separate layer. Moreover, Cyber security also provides mobile security which as the name suggest; helps cellphones and tablets alike to virtually be involved in all type of security. Fourth, Cyber Security in addition to including the processes and decisions for handling and protecting data assets also aids permission users to have them whenever accessing a network. Furthermore, where or how the data may be stored or shared all fall under this category of Operational Security as well. Additionally, it could be seen providing disaster recovery and business continuity if in case such misfortune would do so to arrive, after all it dictates how an organization were to restore its loss of operations or data from the possible Cyber Threats. It is crucial to note here that the End-user education in which details in addressing the most unpredictable Cyber Security factor; is people, considering it is very much a built in mechanic that humans make mistakes, it wouldn’t be farfetched for anyone to accidentally introduce a virus to an otherwise protected system due to failure of following basic security practices. This is why it is advised for users to delete suspicious email attachments or checking in unsecure websites, avoid plugging in unidentified USB Drivers, and many more other vital necessities that serves crucial in depending the system from the likes of any accidental viruses or possibly harmful threats. Moving on into the hypothetical future of what is plausibly able to be done soon, with the ever-evolving age of Cyber Security; it can be rather challenging to predict what may to come exactly. Even so, experts did manage to grasp a good concept of the general direction in which this new technology is heading forth to, say for instance; Artificial Intelligence (AI) becoming the core component of all cybersecurity systems. It is without a doubt truthful that as each passing day go by, more and more development will keep nourishing in this modern age where mankind keeps on improving their own creation even further. Thus, it isn’t unlikely for AI’s potential to be used in both the good and bad ways; for examples, elusive hackers may target these powers in hopes of meaning more harms whereas upcoming developers ought to harness this advanced material in means of detecting security issues, addressing vulnerabilities before they can be taken advantage of along with repelling Cyber Attacks once they have begun. Taking into account a study carried out by Michel Cukier, a University of Maryland researcher, it has been proven that hacks are getting so frequent that they are now happening at an average rate of every 39 seconds, most of which were done by tech-savvy people using automated scripts to skim through databases in search for vulnerabilities to exploit. This occurrence is possibly due to the growth in developing countries, creating massive expansions of the teach workforce in which case certain areas aren’t capable of giving sufficient jobs for trained and well-educated trainers that might causes them to turn to pursuing Cyber Crimes instead.

Despite well-resourced companies’ best attempts at shielding their valuables with cyber security specialists, unfortunately they are still getting hacked on a daily basic which indicates the need for new technology advancements due to the current existing one growing old, limited or simply not serving its purpose as well as before. The old IT world is coming to a close; diminishing, with every new day comes with new emerging data threats, therefore it has undoubtedly evoked the demand for innovation and evolution of defense capabilities to secure data integrity in organizations. Several tactics including Context-Aware Behavioral Analytics has been updated, or better for a lack of term; utilized into being a better monitor in identifying suspicious transactions and behavior with disregards to meaningless security alerts that did not point to any attacks. On top of that, “‘zero-day’ exploits” used by hackers to establish a foothold and gather information in systems for several months without any notices, will provoke the next generation Breach Detection to improve itself; with combination of machinery learning and the behavioral analytics to identify these threats and track them to the source. Additionally, slick minded hackers would tend to study a company’s defenses and then send a Trojan horse and because of the huge amount of information being handled in companies, it wasn’t easy to know right away about the lurking danger causing innovation focusing on what happen once an attack has occurred therefore notifying on the breadcrumbs that the hacker leaves behind to be further developed. With many more other impacts likely to be made in the future, it is also highly credible for organization to seek out talented individuals with knowledge of developing Cyber Security even more. Once this becomes gravely essential, Cyber Security Students to be required in learning and adopting future infrastructures and IT architectures (CSAIL) that will enable you to secure most online financial transactions, adding to this; specialist in this field would be welcomed to venture into research on coming up with new Cyber Security ideas.

As technology begins to be more and more important to our daily lives, leading us to become increasingly dependent on it due to how much easier it has made our living days, yet it also leaves us vulnerable to risk as well since with every ups there will always be a downside to it; that is life in general With such factor taken into account, Cyber security is expected to affect mine and yours daily/working lives greatly, especially considering how much there is to be offered by them; they are certainly a big deal. Providing secured networking system with a means of insuring safety to the countless files containing valuable, sensitive data along the lines of medical records or business details. Improvement being made to this technology would surely makes it even more efficient and better at protecting the databases belonging to its respective users, likewise with the numerous mentions of its usage in the paragraph above; it is safe to say here that Cyber Security is hugely essential for keeping your privacy safe. Not only are Cyber Security evolving but so is Cyber Threats as well, they can cause electrical blackouts, failure of military equipment and breaches of national security secrets together with disruption of mobile devices, cellular phones, computers, networks or paralyzing systems, causing data to be unavailable. Because of this, Cyber Security is at top priority in the networking, businesses frontier along with even our casual everyday lives as well. As the future grows closer, it is anticipated for a growth of user; friends and families alike to be aware of this in order to be able of using it properly to secure their personal information. But this is something humans have learnt to do for the past millennials, with every constant evolution comes with changes needed to be adapted; growth is inevitable and is a natural process in life.

Inspired sources:

https://www.cisco.com/c/en/us/products/security/what-is-cybersecurity.html#~types-of-threats

<https://digitalguardian.com/blog/what-cyber-security>

INDUSTRY DATA

Nguyễn Vinh Quang: Solution Architect (987)

Trần Minh Đức: Solution Architect (987)

Nguyễn Vĩnh: Data Engineer (182)

Ngô Nhật Minh: Java Developer (713)

>> Judging from the database shown by the given diagram; it can be seen here that SQL; a special-purpose programming language designed to handle data in a relational database management system has remained consistent as the leading demand of IT skill in throughout these particular time period. Moreover, a text-based programming language such as JavaScript additionally allows both the client-side and sever-side to make web pages interactive. With all of these specific IT skills mentioned; fortunately, all the personally favored jobs above fits in perfectly with these requirements.

>> From the information displayed and provided by Burning Glass, without a doubt; Communication skills has won the favoritism in being the number required baseline skills set along with Problem Solving, Organizational Skills, Writing and Teamwork/Collaboration. All of which slots in cleanly with the demanded skills in the listed occupations above, further solidifying the importance of improving said skills.

>> Microsoft Windows: broadly known as Windows, is a group of several proprietary graphical operating system families, all of which are developed and marketed by Microsoft. It can be said here that, all the three aforementioned career paths above do not necessarily revolve around this system as they tend to be more obligated to be focused on other aspects of their jobs such as coding, analytical problem-solving, researching and more.

Microsoft C#: is an object-oriented programming language from Microsoft that aims to achieve combination of the computing power of C++ and the programming ease of Visual Basic. Likewise, It is an absence feature that all the occupations written above shared in common and held a fewer or lesser importance.

Oracle: being a multi-model database management system produced and marketed by Oracle, it is commonly used for running online transaction processing (OLTP), data warehousing (DW) and mixed (OLTP & DW) database workloads. Similar to the other two factors; there are other alternatives preferred or used instead of this, for instance Java along with SQL.

>> Mentoring: In normal circumstances; people who have chosen and walked the career path of IT would not necessarily need further teaching, as most of the important knowledge would have been learnt and taught during their university years. Not to mention, self-study and research can be made easily done individually regarding any possible lingering questions, therefore it is safe to say that this skill isn’t quite a necessity as it unlike for collaboration and communication skills.

Presentation Skills: Similar with the previously mentioned requirements, this one is not particularly needed either as most projects are either done in teams which only need in-group discussion or workload that requires only one person.

Management: Regarding the three specific occupations, management does not seem to be the main focal point of the job, rather they each have their own tasks to do that may overlap with analytical thinking together with working in teams but not much to the point of managing the whole process on their own.

>>Despite after seeing the charts given by Burning Glass, we have simultaneously come into a collaborative agreement in which none of our favored occupations currently in mind have been changed. In our most humble opinions, staying faithful with the decision you have made along with working hard in regards to improving your skills is better than constantly changing your ideal job in order to adapt with the ever-changing demands. This can be applied beyond jobs selection as it can be proven in normal everyday life, as there are plenty of things you can’t control in life; such as the people around you together with what society requires from you. Yet that doesn’t mean you’ll have to follow to every single one of them, the choice you made will pave a way to a future in which you have hoped and planned for. Personally, it’s preferable to live life the way you want to in contrast of the mindset to continuously follow every new trend, therefore it is why our group members have ultimately stayed with our selected career for now; as possible occurrences in the future including family and personal issues may hinder with the chosen path.

Inspired Sources:

Solution Architect:

https://www.glassdoor.com/Job-Descriptions/Solution-Architect.htm

https://www.betterteam.com/solution-architect-job-description

Data Engineer

https://dzone.com/articles/how-to-become-a-data-engineer

https://www.mastersindatascience.org/careers/data-engineer/

Java Developer

<https://www.betterteam.com/java-developer-job-description>

FEEDBACK

Đức: Help the team to have an organized path to deal with the project, keen on assisting the other members to try to finish their part on time for efficiency in time, take responsibility for hard parts of the project, quirks of a potential leader

Quang: Finish his share of the project before stated schedule even though there were some personal activities must be done, help improved team’s enthusiasm as well gives encouragements, same as Đức (Show potential in leadership), did researches to help other teammates as well

Vĩnh: Shows fair efficiency in working his own part, tent to boost morale of the group, help fixing grammars and vocabularies of others. Still, there were sometimes he tend to overwork as well as messed up his own schedule

Overall, as a team, I see that we are working at a stable flow and manages to finish the project before the deadline. To see that there are some major fallbacks and disadvantages to make the project a reality. Nevertheless, I have hopes in our team to overcomes those barriers and reach the final goal