**PART 1:**

The topic I chose in the beginning of the school year was Cybersecurity because I developed an interest for it due to my current type of work in law enforcement. “Cybersecurity refers to a set of techniques used to protect the integrity of an organization’s security architecture and safeguard its data against attack, damage or unauthorized access” (Paloaltonetworks.com., 2019). These techniques range from the use of software programs to the physical infrastructure surrounding the data server. A software program like Norton Security is used to protect computer systems from viruses and malware. Programs like this one is frequently given updates for better protection, but, with better protection, brings more stronger cyberattacks in this age of technology. These attacks can obtain a person or business’ sensitive information to be sold on one of the multiple markets of the dark web.

The future of cyber security goes hand in hand with this current age of technology. The current age of technology has forcibly evolved basic appliances in the world by giving these appliances access to the internet and networks. Gaining access to the internet and networks, many items in the world are susceptible to viruses, malware, and hackers. These items will need to be updated with future developments from the world of cyber security to protect these common items from cyber-attacks. An example of this type of cyber-attack was documented on CNN (Cable News Network) in December of 2018. In Houston, a family’s digital baby monitor had its network hacked into by an unknown individual and that individual threated to kidnap the family’s newborn baby. The hacker was able to monitor the family by any wireless camera system connected with the baby monitor (CNN, 2018). The attacks, like the one previously listed, are orchestrated by individuals, who have the knowledge and experience with computer software.

The future development in cyber security needs more people to study and gain experience in computer software. Once completing these studies and experiences, these people could obtain IT jobs from many companies and/or governments. A few types of these jobs are in the following list: Information Security Analyst, Lead Software Security Engineer, Chief Security Information Officer, Security Architect, Penetration Tester, Information Security Crime Investigator (University of San Diego, 2019). Cyber careers are created and paid to individuals to protect digital information and data. Depending on an individual’s skill level and experience, the individual can obtain cyber jobs between entry level to high level positions. An individual can increase their skills and experience in cyber security by getting a degree in a field of computer software, testing to obtain certificates in the cyber security field, and working with computers at prior jobs. The skills to use computers is currently on its way to be a necessity in an individual’s daily life and this necessity will open new high paying jobs for individuals with a background in the computer software field.

**PART 2:**

I chose Cybersecurity as my chosen topic because I see myself leaving law enforcement in the near future and it would allow me to show employers that I have both the knowledge (Software Engineer Degree) and the experience (Law Enforcement Career) about the crimes associated with the cyber network. I would love to work as a civilian, but also not waste years of training in my current career. With this type of degree, I would be able to transfer to my department’s High-Tech crime division and it would give me hands on experience with major events in Cybersecurity.

I believe data structure and algorithms are very important to a future career in Cybersecurity because programming / coding is like being bilingual. For example, people that know both Spanish and English have a better set of skills when it comes to communication because they can interpret and translate for others. Having knowledge in coding will allow me to interpret and translate any strengths or weaknesses to a software program for individuals who are not able to understand the data. If I did stay with my law enforcement career, I would be able to testify in court as expert in programming for High-tech crimes because of my degree background and experience in my career. I would be able to protect and seek justice for victims in this new age of crime. Criminals are changing their skills to commit new types of crime such as: Credit card fraud, identify theft, and skimming. If people in my career do not adapt and evolve to the new world of technology, we will be unable to keep our oath to protect the citizens of our community.

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