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CIS 101

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Cyber Security trends in Computer Science

The field of computer science is growing and is becoming more and more advanced every day. People are coding different types of software that can be applicable to many fields. Some trends in computer science are Artificial Intelligence, Robotics, internet of things, electronic currency, big data analytics and many more. One of the trending computer science trends is cyber security. Since more and more people are using technology for different tasks and are putting their personal data online it needs to be secured. Growth in cyber security can protect the data people put online and can help save lives.

Cyber security is becoming more and more popular in computer science because people want their information secured. Businesses, medical facilities, governments, and ordinary people are abandoning physical records and are moving on to saving data electronically and backing it up on the computer. The data being stored on the computers contain valuable information. The number of hackers are increasing because there is value in data and information. Hackers are taking this data and holding it for ransom to get money and are making people vulnerable. People need their data protected because it’s their property and it’s apart of who they are. Technology is a tool used to make tasks easier for people to perform. Since technology is a tool it can be used for good or it can be used for criminal activities. The trends mentioned in the beginning of this paper are some technological tools that can be used for good in society. However, hackers can use the new advanced technology to help assist them in their crimes. The article *The Hacker: Why Protecting your Data is More Important than Ever Before* states “However, with data science and automation, come new areas for the hacker. Artificial intelligence and machine learning are perfect tools for the hacker, where they are used to make decisions about what to attack, who to attack, and when to attack. Hackers can also ‘game the system’ by learning the code used for creating automation, manipulating the model and changing the outcome in their favor.” The advancing technologies are being used by the people who are specialized in computers and sadly some of the specialists aren’t ethical and would rather use the new technology for their personal gain rather than use it to help others. The advancement in technology is a dangerous way to equip hackers with the tools they need to steal data from companies/people. This can easily be fixed by using the same tools and a higher security system to prevent hacker’s attacks.

The main thing about cyber security is that it protects data. Data has had value throughout history. People travelled from all over to visit wise individuals because they had information. For example, King Solomon was the wisest man in history and monarchs from all over brought gold and other treasures to trade for his valuable information. Information still has its value today and if you have enough information on someone it’s possible to control their lives. The article *Why it’s so important to Safeguard your Customer Data and protect your Brand* states “The personal information of consumers is the new oil of the digital world. Everything runs on data. But while the businesses that collect and process consumer data have become increasingly valuable and powerful, recent events prove that even the world’s biggest brands are vulnerable when they violate their customers trust.” Data has become a valuable item in the digital world because with it, you can learn about people’s habits and medical history. The data that is online and is stolen can be used to access different accounts like banking and medical. People don’t want that data exposed because it’s something they worked hard to make and it’s a part of them.

Cyber-crime is hurting business and people. The cybercriminals are stealing from these companies and are taking whatever they can so they can make a profit. The article *Cybercrime costs the global economy $450 billion: CEO* states “In 2016 ‘cybercrime cost the global economy over $450 billion, over 2 billion personal records were stolen and in the US alone over 100 million Americans had their medical records stolen’, said Steve Langan, chief executive at Hiscox Insurance, told NBC”. Cybercrime is definitely stealing people’s information and they are receiving a profit over it. This is why cyber security is becoming popular because there is a need to protect the data. The security that will be put in place can prevent more attacks which will save people and companies money. *Why Cybersecurity Should be the Biggest Concern of 2017* by Cesar Cerrudo discusses the need for more security and why breaches are happening to companies over and over again. Cerrudo states “Finally, a lack of time and money for security. Products need to be built and released quickly. There is a ‘fail fast, fail often’ mantra, which is only fine as long as you ‘fail safe’.” Cerrudo is pointing out that companies aren’t investing in security because they want to get their product out fast and make a profit off it. Companies don’t want their competition to release a similar product before them because it makes it bad for business. People like Cerrudo are realizing that there needs to be more security in the cyber-world and that companies need to actually care about cyber-security because it can protect them from losing millions and can protect their reputation.

Another reason why cyber-security is becoming popular is because there is a demand for jobs in this field. Since people are becoming more and more worried for their information and want more cyber-security to protect their data. The article *Growing Threats and a Shortage of Cybersecurity Professionals* discusses the shortage of cybersecurity professionals and how the number of jobs are increasing. The article states “By 2019, experts foresee a cybersecurity skills shortage of nearly 1.5 million open jobs. Recognizing the need for skilled professionals in the field, Northcentral University launched the Master of Science in Technology and Innovation Management program, specialized in Cyber security.” Since cyber-crime is rising and there is no one to prevent it colleges and universities are equipping students who are passionate about computers that they need to fill those security jobs. Also people today want job security and since there is a demand of security specialists, then people can have a secure job. This is a reason why cyber security is growing and is becoming popular. If there are no people specializing in cyber-security then cyber-crime will only get worse.

Cyber-security is a trending field in computer science because cyber-crime is rising. People are actually caring about their personal information and companies see that there needs to be security to make sure their business is reliable. The growth of cyber-security will help decrease cybercrime and can protect people’s data and secure their livelihood.

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