**Chapter 2**

**Literature Review**

1. The paper discuss about the use of artificial intelligence (AI) to improve information security. Aside from working to develop detached defensive lines, a need to recognize utilizing active security systems. Data were gathered from academic and industrial sources. The research found that the use of AI in cyber warfare direct authority has both benefits and disadvantages. This detection approach is likely to boost business and customer security in the cyber world.
2. This paper discuss about effectiveness of artificial intelligence techniques against cyber security risks. The aim of the researcher was to determine the effectiveness of artificial intelligence techniques. The overall results of the study indicated that AI has become one of the primary assets for firms to improve their performance in terms of cyber security.The findings of the study revealed that all independent variables had significant and positive relation apart from expert system.
3. The paper discus about the survey of evolution of cyber security. If we look back we can see so many problem that it can’t handle. For this so many complex data can be threated. The previously used conventional security systems are no longer sufficient because those systemterms lack efficiency in detecting previously unseen and polymorphic attacks. But when the machine learning came to meet cyber security the protection rate of cyber security protection has been increased. As a result so many polymorphic attack can be easily protected.

[4]The paper discuss about artificial intelligence in cyber-defense technologies. One of the most important things in the world, today is privacy. People need to worry more about invasion of their private life. With the advancement of technologies to provide us more comfort in our lives, even the bad side of it has surfaced more. Hackers use more complex algorithms to crack a network and steal very sensitive and confidential data, which might affect a single person or sometimes as large as a country.The number of cybercrimes are increasing very rapidly.

[5]The paper introduced about the power grid cyber security system. This paper is a state-of-the-art survey of cyber security R&D for a smart grid. The integration of computing and communication capabilities with the power grid has led to numerous vulnerabilities in the cyber-physical system. This cyber security threat can significantly impact the physical infrastructure, economy, and society.

[6]This paper discuss about the information security and cyber security. Information security is only the protection of any information but the cyber security has more area than the information security such as it can be protection of a human or any website or power grid system etc. cyber security, despite often being used as an analogous term for information security, differs from information security.

**Reference:**

1. Basnet, A., 2022. Artificial Intelligence in Cyber Security.
2. Alhayani, B., Mohammed, H.J., Chaloob, I.Z. and Ahmed, J.S., 2021. Effectiveness of artificial intelligence techniques against cyber security risks apply of IT industry. *Materials Today: Proceedings*.

[3]Shaukat, K., Luo, S., Varadharajan, V., Hameed, I.A. and Xu, M., 2020. A survey on machine learning techniques for cyber security in the last decade. *IEEE Access*, *8*, pp.222310-222354.

[4]JAYADEV, C. and GLADIUS, K., ARTIFICIAL INTELLIGENCE IN CYBER-DEFENSE TECHNOLOGIES. “Keep your dreams alive. Understand to achieve anything requires faith and belief in yourself, vision, hard work, determination, and dedication. Remember all things are possible for those who believe”., p.40.

[5]Sun, C.C., Hahn, A. and Liu, C.C., 2018. Cyber security of a power grid: State-of-the-art. *International Journal of Electrical Power & Energy Systems*, *99*, pp.45-56.

[6]Von Solms, R. and Van Niekerk, J., 2013. From information security to cyber security. *computers & security*, *38*, pp.97-102.