

Abstract and vision of project

Team - 1.4

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AI-Enhanced Intrusion Detection System (IDS)

Network Intrusion Detection System. This project shows that monitoring and detection of the network will reduce the downtime of the network and reduce future attacks. In addition, a comprehensive and organized analysis is conducted to verify the causes of the attack. It has been found that most household internet user lacks the means to strengthen their internet connection or networking system. The problem of this project is unauthorized access into a home networking system that may cause harm by stealing private and confidential information as firewalls and anti-virus won't be sufficient against a determined attacker. The scope of this project is to develop an intrusion detection system that will improve the security of the home network as that is the potential user of this system. The objective of this project is to investigate the methods needed to detect any unauthorized access into a home networking system. The detection system will use an open-source system that is readily available but will be tuned for the usage of home users and based on the Windows operating system. The literature review component talks about all the research that has been done prior to the pre-development and post-development of the project. All intrusion detection and prevention systems and their research are further discussed in detail. In the methodology section, it will discuss the usage of the Iteration Development Model as the methodology used in developing this project. In the results and discussions section, the preliminary findings consist of the findings from literature review research, own research and the use case diagrams of the system. Then, the prototype development process and results together with the testing results will be discussed in detail. All the justifications are made clearly. In the recommendations section, all the related recommendations and some improvements that can be made for the future of this project are listed and elaborated. The conclusion section concludes the overall project. The project phases are also being discussed in detail. The project will focus on developing a network intrusion detection system for Windows-based operating systems.