In the recent days, there is a rapid increase in the usage of intelligent data mining approaches to predict intrusion in local area networks. In this paper, an approach for Intrusion Detection System (IDS) which embeds an expert system making data mining technique behave intelligently is proposed. Intrusion Detection System (IDS) is considered as a system integrated with intelligent subsystems, which completes the distributed solution procedure on the basis of exchanging large data and information. Any intelligent process self regulates and self-controls itself in the event of intrusion. The system however requires complete information of the intrusion mechanisms and generates appropriate decisions for preventing from further attacks. The combination of methods is intended to give better performance of IDS systems, and make the detection more effective. The result of the evaluation of the new design has produced a better output in terms of efficiency in detection and reduction of false alarm rate from the existing problems. In this paper we present improved architecture along with implementation details. A proper justification for claiming the proposed approach as a better method is also
endorsed. The challenging research trends in the field of Data Mining involving Intrusion Detection methods is also discussed at the latter part of the paper.

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