

Application Analysis of Neural Network in Computer Network Security Evaluation

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Abstract: *As science and technology advance quickly, more and more people utilise the internet to interact with one another, yet the ensuing network security issue has garnered significant media attention. The elements that influence computer network security include things like as computer viruses, Trojan horses, and security flaws can lower the computer network's safety level. Building the evaluation criteria and procedures for the computer network security evaluation model is therefore essential. Directly impacted will be the security of the computer network. The current computer network security evaluation models' utilisation of all evaluation techniques may produce larger errors. However, this study integrates neural network technology into the computer network security evaluation system and combines the BP neural network technology optimised by the PSO algorithm and computer network security evaluation system to create an optimization-based neural network computer security evaluation system in accordance with the characteristics of existing computer network security evaluation models. According to the simulation results, the computer network security evaluation model of BP neural network technology based on PSO algorithm both increases the evaluation efficiency of network security and improves the evaluation accuracy of network security when compared to the existing computer network security evaluation models.*

Keywords: Neural network; Network security; Evaluation techniques; Particle Swarm Optimization(PSO) algorithm

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