

Abstract

The use of digital currency or cryptocurrency in various virtual transactions is common due to its easiness. Cryptocurrency is a digital currency that is used for virtual transactions on the internet network. The most common types of cryptocurrencies include Ethereum, Ripple, Bitcoin, etc. Even though cryptocurrencies have secret codes that are quite complicated and complex that serve to protect and maintain the security of digital currencies, it is possible to be hacked by skilled hackers. Cryptocurrency-related hacking is a type of digital crime that is very harmful or dangerous acts. For example, in recent years, cases of hacking on bitcoin transactions using ransomware have been on the rise. Ransomware is malicious software that secretly infects a victim's device and suddenly asks for a ransom to decrypt encrypted data. This type of malware aims to blackmail a victim whose computer is infected with ransomware by asking for a certain amount of money as a ransom. Therefore, a design was built in the form of a ransomware detection system based on available bitcoin heist data so as to minimize hacking attacks against cryptocurrency in the future. The ransomware detection system was built using the feedforward neural network method using Weka software. The best results in data testing are using the parameter number of the hidden layer with 7 neurons; learning rate 0.2; and the number of iterations of 5000 produces an accuracy rate of 97%.