Abstract

Near Field Communication (NFC) is a short-range wireless communication technology that supports several features, one of which is an electronic payment. NFC works at a limited distance to exchange information. In terms of security, NFC technology has a gap for attackers to carry out attacks by forwarding information illegally using the target NFC network. A relay attack that occurs due to the theft of some data by an attacker by utilizing close communication from NFC is one of them. Relay attacks can cause a lot of loss in terms of material sacrifice. So it takes countermeasures to overcome the problem of electronic payments with NFC technology. Detection of anomalous data is one way that can be done. In an attack, several abnormalities can be detected which can be used to prevent an attack. Markov Chain is one method that can be used to detect relay attacks that occur in electronic payments using NFC. This research conducted using the Markov Chain method can detect anomalies effectively with good performance.