



ABSTRACT

DETECTION OF MAC SPOOFING IN MOBILE HOTSPOT USING RANDOM FOREST

In computer network, the authentication of each user in the network is essential to the business corporation (Bourgeois and Bourgeois, 2014). One of those authentication problem is mac spoofing. Previous research by Alotaibi and Elleithy (2016) have attempted to formulate a detection technique using RSS data with random forest based on their accuracy. This research attempted to use that technique with the help of feature importance technique as a way of detecting the mac spoofing in mobile hotspot. The implementation used RSS data, random forest, python library and feature importance technique. The RSS that already process by the feature importance shows that the top 3 most important feature of the benchmark model device that had been created cannot be mimic by other device with mac address spoofing technique.

Keywords: Mac addresses, RSS, Random forest, feature importance



ABSTRAKSI

DETEKSI MAC SPOOFING DI HOTSPOT SELULER MENGUNAKAN RANDOM FOREST

Dalam Jaringan komputer, autentikasi untuk setiap pengguna di jaringan sangat penting bagi bisnis suatu perusahaan (Bourgeois and Bourgeois, 2014). Salah satu dari masalah autentikasi tersebut adalah *mac spoofing*. Sebelumnya telah dilakukan riset oleh Alotaibi dan Elleithy (2016) mereka telah membuat sebuah teknik deteksi menggunakan data RSS dibantu dengan *random forest* berdasarkan akurasi. Riset ini akan menggunakan teknik tersebut dibantu dengan teknik *feature importance* untuk mendeteksi *mac spoofing* di hotspot seluler. Implementasinya menggunakan data RSS, *random forest*, *python library*, teknik *feature importance*. RSS yang diproses oleh *feature importance* akan menunjukkan 3 fitur yang paling penting dari data patokan yang tidak bisa ditiru oleh teknik *mac spoofing*.

Kata kunci: *Mac addresses, RSS, Random forest, feature importance*