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Patent Search

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Abstract:

SECURING CLOUD DATA WITH A HYBRID APPROACH: MACHINE LEARNING AND CRYPTOSYSTEMS A method for the development To achieve higher levels of security in environment, one of the most critical parts of cloud service provisioning is preventing data breaches caused by unauthorized access to personal information. Many security procedures have still to be improved to an appropriate level. There are several approaches for achieving data and information security, such as cryptography and steganography. This study presents a novel technique to mutual authentication that uses a pre-trained model of a convolutional neural network (CNN) to detect illicit internet activities. The method for countering a subchannel attack on the elliptic curve cryptosystem described in the invention is advantageous in that it improves cryptosystem stability while lowering the system's computational overhead. FIG.1

Complete Specification

Description:SECURING CLOUD DATA WITH A HYBRID APPROACH: MACHINE LEARNING AND CRYPTOSYSTEMS

Technical Field

[0001] The embodiments herein generally relate to a method for a securing cloud data with a hybrid approach: machine learning and cryptosystems.

Description of the Related Art

[0002] The Cloud computing is predicted to become a critical component of the enterprise IT infrastructure of tomorrow. Data centers, like the cloud, store and transfer data between servers and clients. Users can store their data in the cloud and use high-quality cloud apps without having to worry about maintaining their own servers or installing new software. Our method combines hybrid cryptography's benefits with the power of deep learning to deliver a robust and adaptable solution for cloud security. ECCs are based on mathematical entities known as elliptic curve groups. An elliptic curve group is defined as an Elliptic Curve (EC), which is a collection of points known as "the points," to an elliptic curve equation, as well as a suitably defined operation between the curve's points. As a result, this data is subject to unauthorized access as well as other privacy and security breaches. Cryptography and steganography are well-known data protection mechanisms in computer security.

[0003] Reduced storage costs, virtualization, grid computing technologies, service-oriented software, power efficiency, and huge facility management are some of the fundamental elements that make cloud computing more efficient. The former are also known as prime fields, integer fields, or fields with a prime characteristic; the elements are integers, and addition and multiplication are defined modulo a prime number. The latter are also known as binary polynomial fields or fields of characteristic two, and their constituents are binary polynomials. The operations of addition and multiplication are defined as the addition and multiplication of polynomials modulo an irreducible polynomial. Because of the widespread usage of the internet, multimedia distribution is becoming an increasingly important method of worldwide service delivery.

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