An Enhanced Round-Robin-Based Job Scheduling Algorithm in Grid Computing

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Abstract

Nowadays, grid computing is a recognized name in the area of computation. Grid computing provides a strong platform for the jobs demanding high computational power. Resource scheduling and job scheduling are two broad categories of grid computing. A lot of work has been done in this area. In this paper, we present a new job scheduling algorithm which focuses on standard round-robin algorithm with the addition of new "Enhancement Factor". The experimental evaluation shows that the proposed algorithm reduces Average Waiting Time and Average Turnaround Time, and it takes very less time to process the jobs than other existing algorithms.

Keywords

Job scheduling   Round robin   Grid computing   Waiting time
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1 Result(s) for 'RAKSHA PANDEY'

within *iccnc2018* ✪ *Chapter* ✪

1.

Chapter and Conference Paper

Grading and Defect Detection in Potatoes Using Deep Learning

Deep learning has been employed in a number of tasks. Taking inspiration from detection of tumors in medical tiff images, we had an idea of doing the same with other objects such as vegetables and plants which...

Nikhil Pandey, *Suraj Kumar*, *Raksha Pandey* in *Communication, Networks and Computing* (2019)

Support

18- 19 ⑥

An enhanced AES algorithm using cascading method on 400 bits key size used in enhancing the safety of next generation internet of things (IOT)

Ritambhara ; Alka Gupta ; Manjit Jaiswal   All Authors

Publisher: IEEE

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Document Sections
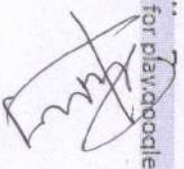
I. Introduction

II. Related Work

Abstract

Abstract:

This paper of cascaded[4] AES [1][2] suggest symmetrical block encryption using 200 bit sequential plain text and 400 bit key. Algorithm uses 400 bit key which is divided into 2 parts of 200–200 bits providing different keys for each rounds of cascading which will increase the security. Here AES-AES cascading is done which consist of 5 rounds instead of 10, thus it will omit the mix column twice from the original AES Encryption technique. Omitting mix column [3] single time reduce the complexity from 2^{48} to 2^{16}. Hence, it takes half time than simple

2017-18

An advanced AES algorithm using swap and 400 bit data block with flexible S-Box in Cloud Computing

Publisher: IEEE

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Chinnakandukuri Paul Pramod ; Manjit Jaiswal   All Authors

Abstract

Document Sections

I. Introduction

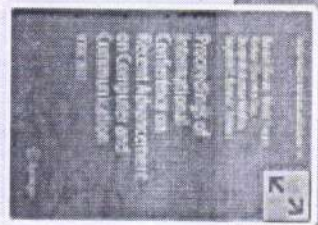II. Literature Survey

III. Proposed Work

IV. Example

Abstract:

This paper suggests a new Advance Encryption Standard (AES) encryption technique. New Algorithm uses 400 bit block encryption scheme and a key dependent rotated S-Box which varies according to the 200 bit key provided by the user. Fixed S-box allows hackers to study S-box and find weaker points, whereas using key-dependent S-Box, it is harder for attacker to do any offline analysis of an attack on one particular set of S-boxes. This helps to store data in cloud securely and to transfer data without any obstruction or modification in Cloud Computing and big data.

Impact of Various Networks Security Attacks on Wireless Sensor Localization Algorithms Based upon WSN Node's Residual Energy

Santosh Soni ✉ & Manish Shrivastava

Abstract

Presently, wireless sensor network localization algorithms attracted various researchers toward

Impact of Various Networks Security Attacks on Wireless Sensor Localization Algorithms Based upon WSN Node's Residual Energy

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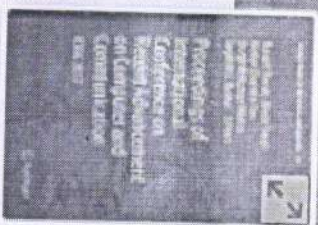Conference paper | First Online: 19 April 2018

854 Accesses

Abstract

Presently, wireless sensor network localization algorithms attracted various researchers toward

A smoke detection algorithm based on K-means segmentation

Publisher: IEEE

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Manish Shrivastava ; Princy Matlani   All Authors

Abstract

Document Sections

1. Introduction

2. The Smoke Detection

3. Methodology

Abstract:

The fire accident usually causes economical and ecological damage as well as cause danger to people's lives. Therefore, its early detection is must for controlling this damage. Also smoke is considered as main constituent of fire, thus an efficient smoke detection algorithm on sequences of frame obtained from static camera is proposed. It is based on computer vision based technology. This algorithm uses color feature of smoke & is comprised of following steps: reading the image, preprocessing, classify color pixels using k-means segmentation. This paper discusses mainly the segmentation problem. It adopts L*a*b* color space and k-means clustering algorithm to isolate the smoke from video sequences. Finally the K-means

A Survey on Video Smoke Detection
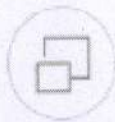
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Proposing Pattern Growth Methods for Frequent Pattern Mining on Account of Its Comparison Made with the Candidate Generation and Test Approach for a Given Data Set

Vaibhav Kant Singh

Abstract Frequent pattern mining is a very important field for mining of association rule. Association rule mining is an important technique of data mining that is meant to extract meaningful information from large data sets accumulated as a result of various data processing activities. There are several algorithms proposed for having solution to the problem of frequent pattern mining. In this paper, we have mathematically compared two most widely used approaches, such as candidate generation and test and pattern growth approaches to search for the better approach for a given data set. In this paper, we came to conclusion that the pattern growth methods are more efficient in maximum cases for the purpose of frequent pattern mining on account of their cache conscious behavior. In this paper, we have taken a data set and have implemented both the algorithms on that data set; the experimental result of the working of both the algorithms for the given data set shows that the pattern growth approach is more efficient than the candidate generation and test approach.

Keywords Association rule mining · Candidate generation and test
Data mining · Frequent pattern mining · Pattern growth methods

Proposing a New ANN Model for Solving XNOR Problem

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Abstract—Artificial neural network (ANN) are a family of models which are having inspiration from the biological neural network. The goal of an ANN system is to develop algorithms that requires machines to perform cognitive task in an efficient manner using the computing power of the Computer Systems. A variety of problems are solved by various types of ANN systems. In ANN system, the problems that are having linearly separability property inherent in them are solved easily by means of single layer perceptron model and models which are having analogy with Single layer Perceptron model. In this paper, the author gives one solution to XNOR problem having minimum configuration MLP topology. The topology of the ANN plays a very vital role in providing the solution to the problem. Every topology is capable to solve a set of problems having some common characteristics in them in a unique manner. The same problem when solved with a different topology has a different framework for providing solution. The XNOR problem discussed in the paper is a Non Linearly Separable problem and requires complex mathematical solution. Architectural graph and signal flow graph representation is used to show the proposed solution. Logistic function is used as the transfer function in the hidden layer whereas threshold function is used as transfer function in output layer.

Keywords: ANN, BNN, MLP, Activation Function, XNOR, Architectural Graph (AG), Block Diagram Representation (BDR), Signal Flow Graph (SFG)

I. Introduction

Artificial Neural Network is generally a parallel and distributed processing architecture whose working is primarily based on neuronal structure present in the human brain. Brain learn from experience that it gains after having an interaction with the environment it is in. There are approximately ten billion neurons in human cortex and sixty trillion synapses or connections between neurons as reported by the scientists working in the concerned field. A BNN mainly consist of a cell body that process the inputs, a collection of dendrites which brings electro-mechanical information into the cell body and an axon that transmit information from one neuron to other. At the end of neuron the contact of dendrite made through synapses. Similar to BNN an Artificial Neural Network comprises of relatively simple topologies that which can often be expressed in a tree structure. Similar to BNN an artificial neural network are generally made up of number of interconnected processing units which individually comprises of a transfer function. Input patterns also referred to as input vector are presented to the network via the input layer that communicate the information present in the input vector to one or more hidden layers present in the architecture and which are the layers where the actual processing is done by means of system of weighted connection. Hidden layers are having projections on the output layer which are ultimately responsible for the output of the system. ANN system consists of learning algorithms which are responsible for the modification of the weights of connection according to the input vector.

An ANN is in general when broken down word by word reveals that it is in essence the network of interconnected artificial neurons. An artificial neuron is basically a processing element which has a various input points, where each input point is having an associated weight, a transfer function is also present that which determines the output of the Processing element. Network may be trained by adjusting the weight associated with the connection and obtain the desired output from a training set. Some of the neural network system model include SOFM, ADALINE, MADALINE, perceptron, MLP, Bidirectional Associative Memory(BAM), Boltzmann machine, BSB, Cauchy machines, Hopfield network, ART, RNN, RBF etc.

There are three types of systems are used to represent ANN system on piece of paper named as BDR, SFG and AG. In this paper SFG and AG are used to represent solution. Three important component of any ANN model are Network Topology, Learning Algorithm and Individual Neuron. A given set of definite protocols for the solution of a learning problem is called a learning algorithm. Fundamentally learning algorithms can be classified as supervised and unsupervised algorithm. If the network is aware of desired response for the given input then the algorithm is supervised otherwise it is unsupervised algorithm. The neuron of ANN system is categorized into linear and nonlinear neuron.