

(Shift Reduce Parsing :A predictive Approach)

الذي نُشر في مجلة :

(Journal of Computer Science)

2009 Volume 05 Number of issues per year:12 ISSN: 1549-3636

ملخص البحث:

A bottom – Up of a context – free grammar (CFG) constitutes of sequence of reductions, with an objective to a map a given string to the starting grammar symbol. The reductions a need for a prediction of such reduction sequences as early as possible and before the complete formation of their respective handles. On the other hand, parsing errors do exist. Hence, there is a need to synchronize the predictions of reduction sequences with error recovery, and in away that minimize its associated overhead. In this paper, and to satisfy these needs, we propose a predictive shift – reduce parser. Approach: First, we introduce predictive characterization of CFG, within the frame work of bottom – up parsing, consists of: a reduction – oriented representation for its productions and derivations, and an associated set of prediction relations for their respective reduction sequences and error recovery. Second, we map such representation into a shift reduce parsing automaton, embedded by the associated set of prediction relations as parsing actions. Finally, we develop predictive parser that simulates the run of the shift – reduce on input strings generated by CGF.

Result: A predictive parser has been implemented. The parser behavior is predictive. It simulates shift – reduce automata in terms of two algorithms. The first one performs explicit shift – reduce parsing actions based on embedded prediction of the subsequent reductions. The second one performs parsing actions based on explicit prediction of the reduction sequences with implied shift –reduce actions. 10-20% reduction of the parser size has been achieved, with a parsing behavior proportional to a factor reflecting the grammar ambiguity. Conclusion The presented parser is worthwhile due to being novel and more efficient than others even if the difference is not so great as to make it substantially more practical.

Key words: Bottom – up parsing automata, prediction, error recovery – free-grammars.

(Information Hiding: A Generic Approach)

الذي نُشر في مجلة :

(Journal of Computer Science)

2009 Volume 5, Issue 12

ملخص البحث:

Problem statement: Privacy and security over communication channels are of primary concerns. Due to their complexity and diversity, there is a need for continuous improvements of the adopted solutions. In this study, we consider two of the adopted ones, namely, steganography and cryptography and propose a new information hiding system. **Approach:** The proposed system was based on a generic approach that incorporates text-based steganography and cryptography methods in a way that permits their combined or stand alone adoption. Thus, achieving message encryption incorporated with its concealing inside another unsuspecting one. Furthermore, two steganography methods (the inter-word spaces method and syntactic methods) had been combined with a hybrid text-encoding in a form of binary representation of terns rewriting systems. **Results:** An information hiding system had been implemented. The system offered encrypting and hiding dynamic and static text within a cover-text. The conducted experiments using static texts had shown a non-noticeable increase (0.02%) in the size of their respective stego-texts. For the dynamic texts, cover- texts with a size proportional to the length of the secret messages were needed. **Conclusion:** A generic model for information hiding with a respective implementation framework had been used as an effective tool to develop a hybrid and scalable steganography system that combined good features from the existing ones.

الدكتور نمير ناظم

(Computing an Incompressible Viscous Fluid Flow Using Neural Network Based on Modified Adaptive Smoothing Errors)

الذي نُشر في مجلة :

(An International Interdisciplinary Journal "ISSN 1343-4500")

Volume 13 Number 3, 2010

ملخص البحث:

An Adaptive Neural Networks (ANN) with Modified Adaptive Smoothing Errors (MASE) based on back-propagation algorithm are presented in this paper to investigate an incompressible Viscous flow represents by stream line function (ψ) through symmetrical double steps channels.

Numerical simulation of fluid flow is complex and inappropriate in situations where rapid calculations are needed. The alternative proposal is used to construct learning system by enforcing two stages run simultaneously, the first stage concerns to construct FEM employing a new concept named adaptive incremental loading to selected patterns effectively while the second stage pertains to ANN based on MASE. The proposed training system is fast enough and the simulation results of the learning system Are in good agreement with the available previous works.

Keywords: learning system; neural networks; incompressible flow; partial differential equations; finite Elements; Adaptive smoothing error.

(Arabic Text Steganography using Kashida Extensions with Code)

الذي نُشر في مجلة :

(Journal of Applied Sciences)

Year: 2010 Volume: 10 | Issue: 5 | Page No.: 436-439

ملخص البحث:

In this study, a text steganography technique suitable for Arabic texts is proposed, together with its implementation. This technique hides information by inserting extension characters (Kashida) at suitable word positions. We insert extension character in a word position to hold secret bit one and leaving position empty to hold secret bit zero. The Huffman compression algorithm is used to convert the embedding message into a compressed binary form and an Arabic text steganography technique based on character extensions is used to insert the compressed binary into the determined positions of the words in the cover text. This method was compared with some existing Arabic text steganography methods and it was shown more capacity and security.

Key words: Arabic text, cryptography, hiding, text steganography, text watermarking, feature coding.

الدكتور محمد محافظة

(On Evaluating the Reliability of Multiprocessor Systems)

الذي نُشر في مجلة :

(European Journal of Scientific Research)

ISSN 1450-216X Vol.41 No.4 (2010), pp.490-496

ملخص البحث:

This research proposes a fault-tolerant multiprocessor system, consisting of N Processors. Fault tolerance is pursued through a proper combination and integration of error processing and diagnostic α -count mechanisms. The main objective of this work is to evaluate the reliability of the proposed system. The resulting analysis of the simulated System shows that the reliability is a proper measure that is descriptive of the entire system. Simulation is also shows the conflicting effects of the threshold at on the longer permanence of faulty processors in the system; that is increasing the value of α leads to Increase the probability of erroneous computation and hence decreases the reliability.

Keywords: Multiprocessor Systems, Fault Tolerance, Probabilistic Simulation, Error Processing, Fault Detection, Reliability Evaluation.

(Fault-Tolerant Routing in Butterfly Networks)

الذي نُشر في مجلة:

(Journal of Applied Sciences 10 (11):903-908,2010)

ملخص البحث:

This research shows that Butterfly networks can be fault-tolerant using Masked Interval Routing Scheme (MIRS). The MIRS was introduced with the aim of compressing the routing tables in a network. It was shown that MIRS could drastically reduce interval information stored in networks such as globe and hypercube graphs, compared to the classical Interval Routing Scheme (IRS). In Butterfly graphs of $O(N)$ vertices the number of intervals per edge goes down from $\Omega(\sqrt{N}/\log N)$ in IRS to $O(\log N)$ in MIRS. This research shows that MIRS may be advantageously used in Butterfly networks, proving that optimal routing with one interval per edge is still possible with a harmless subset of faulty vertices. This research gives an optimal algorithm to reconfigure the intervals in the presence of faults.

Keywords: Distributed networks, butterfly network, Interval Routing Scheme (IRS), Masked Interval Routing Scheme (MIRS).

الدكتور عامر أبو علي

(Bilingual Text – Based Image Retrieval Using PDA's "BTBIRURP")

الذي نُشر في مجلة :

(International Review in Computers and Software "IRECOS")

Vo1. 5,N.3 May 2010

ملخص البحث:

The aim of this paper project is it provide a powerful combination of information retrieval approaches and the new technology advances (mobile technology) We examined capabilities of mobile devices and PDA's in retrieving images on Text-based image retrieval approach (TBIR) by using their caption which in Arabic and English languages.

The result were promising in helping Arab community in Image Retrieval field
Copyright © 2010 praise worthy prize. S.r.I. - All rights reserved.

Keywords: CBIR.TBIR, Bilingual Dictionary Approach, CLIR.

(PMP growth in the IT field)

الذي نُشر في مجلة :

(European of scientific Research)

ISSN 1450-216X Vo1.42 No.4 (2010), pp.661-666

ملخص البحث:

In the last 5 years the project management methodology becomes one of the main Concerns in the IT projects & companies. It's considered as a main factor in project Successes. IT companies found that they should manage their projects by dedicated well Experienced project managers. Many of these companies start consider PMP certificate as a Must for any candidates or as preferred at least. For that there is a big jump in PMP's in the IT field.

Keywords: PMBOK (Project Management Body of Knowledge), PMI (Project Management Institute), WBS (Work break down structure).

(Factors and Rules Effecting E – Government)

الذي نُشر في مجلة :

(European Journal of Scientific Research)

ISSN 1450-216X Vol.39 No.2 (2010), pp.169-175

ملخص البحث:

The purpose of this paper is to specify a set of factors that shows the effectiveness and restrictions of the e-government and its different aspects. These factors were derived from a comprehensive revision of previous studies and literature related to the subject matter (e-government).

Keywords: Communication technologies, E-government

(Applying a Nero Method of Soft Computing for System Reliability)

الذي نُشر في مجلة :

(Journal of Applied Science)

10 (17):1951-1956,2010 ISSN 1812-5654

ملخص البحث:

This study present a new method of soft computing for the reliability of a system. This is an application of Atanassov's intuitionistic fuzzy set theory in reliability engineering. The proposed method reduces to a method of fuzzy computing of system reliability as a special case and it is different from the existing methods of fuzzy system reliability. The application of IF-logic in our soft-computing method widens the scope to the reliability engineers to analyse the reliability of a large system even if the fractional data be not crisp in nature.

(Operations Algorithms on Quantum Computer)

الذي نُشر في مجلة :

(International Journal of Computer Science and Network Security)

VO1.10 No.1, January 2010

ملخص البحث:

A quantum computer is a device for computation that makes direct use of distinctively quantum mechanical phenomena, such as superposition and entanglement, to perform operations on data. In a classical (or conventional) computer, the amount of data is measured by bits, in a quantum computer; it is measured by quantum of bits (qubits). This work describes, and implements the universal quantum logic gates, the terminology is introduced with two well known quantum gates, the quantum NOT, and the quantum XOR gates. The NOT and XOR gates have already been described in classical reversible logic.

This work gives the implementation of the quantum circuits, such as the Quantum Half-Adder Circuits, which consists of uantum control control not gate (CCNot) and quantum control not gate (CNot). Also, it describes and implements the Quantum Full-Adder Circuits, which consists of two Quantum Half-Adder Circuits and one control not gate (CNot).

Depending on the quantum circuits, one can implement the quantum basic arithmetic operations such as (addition, subtraction, multiplication and division). After each Implementation, the computational complexity of each step is calculated.

Key words:

Quantum computing, Quantum Logic Gates, Truth Table, quantum mechanical, qubits, quantum mechanical, superposition

ملخصات الأبحاث المدعومة المنشورة في مجلات :

كلية تكنولوجيا المعلومات

الدكتور رعد فاضل علوان

(Using Modified Fixed Point Numbers Representations in Spelling Checker)

الذي نُشر في مجلة :

(Journal of Applied Sciences)

Year: 2010 Volume: 10 Issue: 17 Page No.: 1963-1967

ملخص البحث:

This study is concerned with the process of designing and implementing an English text spelling checker which can detect and correct the misspelled words. The spelling checker is built using a modified version of Fixed Point Numbers Representations Technique (FPNRT), which is a compression method that is suitable to this kind of applications. The modified FPNRT will transform the dictionary words into numeric values and then stores them in a data base file of that form, which is considered to be a new way for storing a dictionary. This method gives comparatively good compression ratio and very quick in compression/decompression process. Therefore, this method is good for files which are frequently read and updated. This approach will minimize the memory space required to store the dictionary by achieving a compression ratio of 37% on average and also enhance the performance of the spelling checker by maximizing its speed which takes $O(\lg n/5)$. This approach is also provide a new way for building a list of candidate words that may be used to correct the misspelled words.

الدكتور عامر أبو علي

(Arabic Derivations Recognition)

الذي نُشر في مجلة :

(International Review on Computers and Software "IRECOS")

Sep2010, Vol. 5 Issue 5, p495

ملخص البحث:

The aim of this paper is to recognize two forms of derivations namely (ism al fael (إسم الفاعل) and (ism al mafoal (اسم المفعول). On the other hand, the recognition process is usually difficult because there are many factors interfere in this process. Thus we will try to control some of these factors, by developing an algorithm that serves our needs. The results from the evaluation process showed that the effectiveness of our system in recognizing these derivations is very high, with a few problems due to the limitations in modifying some words.

Key Words: derivation , diacritics, إسم المفعول , إسم الفاعل

(Evaluating the Vulnerability and the Security of Public Organizations Websites in Jordan)

الذي نُشر في مجلة :

(Journal of Applied Sciences)

Year: 2010 Volume: 10 Issue: 20 Page No.: 2447-2453

ملخص البحث:

In this study, we evaluate governmental agencies from a security perspective. In particular, we focus on assessing the vulnerability of those websites and their security weaknesses or holes. We use several selected metrics available for this purpose. As a result we show those websites strengths and weaknesses from the vulnerability viewpoint as well as classify those weaknesses or problem for their severity levels, hence classify those websites from their security levels from the most secure website to the least secure one. Finally, we provide recommendations on how some of those weaknesses can be reduced or eliminated.

(A Comparative Study of Techniques used for Evaluation Web Page Quality of the Public Organizations in Jordan)

الذي نُشر في مجلة :

(International Journal of Academic Research)

Vol. 9, Issue 3, No 1, May 2012

ملخص البحث:

Nowadays IPv6 over IPv4 tunnels are widely used to form the global IPv6 Internet. This paper demonstrates the two tunnels and show when to immigrate from IPv4 to IPV6. Then the risks of immigration are discussed.

Keywords: IPv6, IPv4, IETF

(The Benefits of Using Internet Protocol Version (IPV6)

الذي نُشر في مجلة :

(Journal of Praise Worthy Prize)

ISSN 1828-6003 Vol.5 N.6 November 2010

ملخص البحث:

In this paper I discuss the advantages of using protocol version 6, why it's necessary to use this protocol, the most features and also number o IPv6 users in each continent and their percentage.

Keywords: Internet protocol, IPv4, Network Address Translator m Dynamic Host Configuration Protocol, Top- Level Aggregators.

(State – of – the – Art: Ontology Matching Techniques and Ontology Mapping Systems)

الذي نُشر في مجلة :

(The International Journal of ACM Jordan)

ISSN 2078-7952 Vo1.No.3,September 2010

ملخص البحث:

The objective of a system of information integration is to provide a uniform view of sets of information sources on the same scope, but created independently of each other, which can be differentiated by formats, structures, modes of access or the terms represented. More specific, ontology alignment plays an important role in solving interoperability in heterogeneous systems and in many application domains. The aim of this paper is to describe the mismatching that could appear when trying to integrate, map, align or match two ontologies. It also describes many matching strategies and operations. Finally, a comprehensive review of existing ontology alignment tools. Several existing ontology mapping methods were analyzed and compared, since before creating a new approach it is essential to fully understand related work. Here, this means both theoretical work and existing approaches to the alignment of ontologies or other well-defined structures, including their weaknesses, which must be understood if they are to be improved.

Keywords :Ontology ; Semantic Web ; Ontology Matching ; Ontology Alignment

الدكتور ايمن عيسى

(An Algorithmic Software Cost Estimation model for Early Stages of Software Development)

الذي نُشر في مجلة :

(International Journal of Academic Research)

ISSN:2075-4124 Volume 3.No:2: March 30.2011

ملخص البحث:

Software development is moving towards agility with use cases and scenarios being used for requirements stories. Estimates of software costs are becoming even more important than before as effects of delays is much larger in successive short releases context of agile development. Thus, this paper reports on the development of new linear use case based software cost estimation model applicable in the very early stages of software development being based on simple metric. Evaluation showed that accuracy of estimates varies between 43% and 55% of actual effort of historical test projects. These results outperformed those of well-known models when applied in the same context. Further work is being carried out to improve the performance of the proposed model when considering the effect of non-functional requirements.

Keywords—Metrics, Software Cost Estimation, Use Cases

(Platform Effect on Web Services Robustness Testing)

الذي نُشر في مجلة :

(Journal of Applied Sciences)

year:2011 Issn:1812-5654 Volume:11 Issue:2 pages/rec No: 360-366

ملخص البحث:

Web services are considered a new paradigm for building software applications that has many advantages over the previous paradigms. Web service testing is a very important factor to increase or decrease the requester's trust of a given Web service. However, Web service testing still facing many problems; one of these problems is that the platform where a Web service is deployed may affect the testing results; this research proves this claim by demonstrating how the robustness and security quality attribute of a Web service may be affected by the platform this Web service is deployed on. This will be accomplished by comparing the responses of Web services accomplishing the same task deployed on different platforms, namely, axis, GLUE and Microsoft .NET. This study approach proves that Web services robustness and security testing do actually depend on the platform.

Keywords: platform ; testing ; quality attributes ; Web service ; robustness

الدكتور سعد المهداوي

(Hybrid Dynamic Routing Protocol for Finding an Optimal Path to Routers)

الذي نُشر في مجلة :

(International Journal of Academic Research)

Year :2011 No:2996 ISSN:2075-4124

ملخص البحث:

One of the prevailing tendencies of the modern stage of development of information technology is the telecommunication technologies integration based on computer networks which become more complex and the traffic load increases. There is a need to determine the routing traffic within a network so as to minimize the number of communication channels used. To reduce the risk of being unable to handle traffic required to find the best and optimal path from the source to the destination and to minimize the total cost of the system operation. This paper will focus on the methodology that implements hybrid dynamic routing protocol that can solve congestion and hacking problem using Adaptive Genetic Algorithm (AGA). The new suggested structure combines different solutions to select the optimal path. Such structure will take into consideration different circumstances related to high load and utilization on advanced Wide Area Networks (WAN) due to Security gaps and probable attacks and network activities.

(Efficient Routing LEACH (ER-LEACH) Enhanced on LEACH
protocol in Wireless Sensor Networks)

الذي نُشر في مجلة:

(International Journal of Academic Research)

Vol.3 No.3 May 2011,1 Part

ملخص البحث:

Efficient design and implementation of wireless sensor networks has a hot area of research in recent years, due to the Vast potential of sensor networks to enable applications that connect the physical world to the virtual world. By networking large numbers of tiny, low-powered wireless nodes with limited computation communication, and sensing abilities, in a battery – powered sensor network, energy and communication bandwidth are a precious resources. Thus there is a need to adapt the networking process to match the application in order to minimize the resources concourses consumed and extend the life of the network. In this paper, we introduce an Efficient Routing LEACH (ER- LEACH) which is a modified version of the well known LEACH protocol, ER- LEACH Proposes vital solution to some shortcoming of the pure LEACH .ER- LEACH is expected to perform well especially when the mobility is high and will prolong the overall network lifetime through load balancing. OMNET ++ simulator will be used to prove that ER- LEACH performs better than LEACH Protocol.

Key words: Wireless sensor networks, Geographic routing, Localized routing Power-awares routing, reliability, timelines, query processing, redundancy, energy conservation, QoS.

كلية تكنولوجيا المعلومات

الدكتور عامر أبو علي

(An Automated Approach to Embrace Changes during Use Case Model Evolution)

الذي نُشر في مجلة :

(International Journal of Computer Science Issues)

Vol. 8, Issue 5, No 1, September 2011 ISSN (Online): 1694-0814 www.IJCSI.org

ملخص البحث:

Use case model is subject to changes throughout the software development life cycle. Impacts of these changes affect directly the requirements and consequently the resulted system. Scrapping and replacing use case is expensive; in this paper we proposed a solution that integrates changes in use case in requirement phase. This solution combines independent enhancements to some version of a use case into a new version that include the enhancements and the old use case. CASE tool implementation and experimental evaluation of the proposed approach showed promising results in terms of software development time saving and better use case models integrity.

Keywords: Requirement engineering, Functional requirements, Use case changes, Use case evolution.

الدكتور عامر أبو علي

(Comparison Study between IPV4&IPV6)

الذي نُشر في مجلة :

(International Journal of Computer Science Issues)

Vol. 9, Issue 3, No 1, May 2012 ,ISSN (Online): 1694-081

ملخص البحث:

Nowadays IPv6 over IPv4 tunnels are widely used to form the global IPv6 Internet. This paper demonstrates the two tunnels and show when to immigrate from IPv4 to IPV6. Then the risks of immigration are discussed.

Keywords: IPv6, IPv4, IETF

(Convergence -Traffic over wireless networks)

الذي نُشر في مجلة :

(International Journal of Academic Research)

Vol.3.No.4,july,2011,1 part

ملخص البحث:

The main purpose of this paper to give the reader a better understanding of wireless networks convergence traffic with is used by different technologies and networks such 2G/3G/4G wireless networks. The consideration, of wireless networks is a proven networking infrastructure that supports the convergence traffic (voice, video, data) transmission, why convergence traffic? In the network bandwidth is increasing rapidly, the transmission speed increased to 10/100/1000 and to 10 Gbps so it is proven that we need to integrate QoS in convergence traffic, to deliver high quality voice , video, and data streams over wireless networks which allows building a packer core network for different technologies .

Keywords: MPLS: Multi protocol label switching 2G: second generation mobile system, 3G third generation Mobile system, 4G Fourth generation Mobile system.

(Prediction Phase in Associative Classification Mining)

الذي نُشر في مجلة:

(International Journal of Software Engineering and knowledge Engineering)

Vol.21,No.6(2011) 855-876 DOI: 10.1142/S0218194011005463

Volume 21, Issue 06, Septembe

ملخص البحث:

Associative classification (AC) is an important data mining approach which effectively integrates association rule mining and classification. Prediction of test data is a fundamental step in classification that impacts the outputted system accuracy. In this paper, we present three new prediction methods (Dominant Class Label, Highest Average Confidence per Class, Full Match Rule) and one rule pruning procedure (Partial Matching) in AC. Furthermore, we review current prediction methods in AC.

Experimental results on large English and Arabic text categorisation data collections (Reuters, SPA) using the proposed prediction methods and other popular classification algorithms (SVM, KNN, NB, BCAR, MCAR, C4.5, etc.), have been conducted. The bases of the comparison in the experiments are classification accuracy and the Break-Even-Point (BEP) evaluation measures. The results reveal that our prediction methods are very competitive with reference to BEP if compared with known AC prediction approaches such as those of 2-PS, ARC-BC and BCAR. Moreover, the proposed prediction methods outperform other existing methods in traditional classification approaches such as decision trees, and probabilistic with regards to accuracy. Finally, the results indicate that using the proposed pruning procedure in AC improved the accuracy of the outputted classifier.

Keywords: Association rule; classification; data mining; text mining

(Using Artificial Neural Network Models for Pancreas)

الذي نُشر في مجلة:

(International Journal of Academic Research)

Vol.4.No.2.April,2012

ملخص البحث:

Diabetes is a disease that is characterized by an elevated blood glucose level. This can be caused by a reduction of the production of insulin by the pancreas (type II diabetes) or by the insulin being less effective at moving glucose out of the blood stream and into cells that need it (type I diabetes) . In this paper we discuss some idea to solve this problem using artificial neural network models pancreas.

Keywords: pancreases, glucose, blood, diabetes._