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CRITERION III

3.1 RESEARCH PUBLICATIONS AND AWARDS

3.4.3 NUMBER OF RESEARCH PAPERS PER TEACHER IN UGC CARE JOURNALS NOTIFIED ON UGC WEBSITE

(2024-2025)

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AFJBS African Journal of Biological Sciences
Journal homepage: http://www.afjbs.com

Research Paper Open Access

Innovative Mathematical Framework-based Brain Tumor Detection System

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Abstract: **The current study presents an original system for brain tumor detection based on the mathematical framework approach regarding the application of essential algorithms for the purpose of diagnostic identification. It combines deep learning approach with effective data handling strategies in order to improve the detection and location of the brain tumors at the early stage. Working with a database of 500 MRI scans, the framework reached the average ratio of true detection equal to 0.95. 8% and a sensitivity of 94%; Specificity: The interaction of the 'flat' molecules with a bivalent partner was found to be point specific with a specificity of 79. 3%, as against conventional approaches to achieving success in business ventures that are considered by many to be January 2013 quite effective. The applicability of the proposed system was further proved with different types of tumors and different types of imaging modalities, and the accuracy was up to 92%. A received accuracy of 7% in glioblastoma detection along with a sensitivity of 89%. Precision rate of 5 percent in the diagnosis of meningiomas. The data were further compared with the results from similar works, and an overall improvement of diagnostic accuracy of about 10% was observed. Moreover, it is quite comprehensive and easy to interpret, and it distinguishes itself as a valuable instrument in clinical practice by cutting diagnosis time in a quarter of the time compared to the previously used methods. However, there are some limitations of the proposed approach: a large amount of training data is required and computationally expensive operations are involved. The future studies will enhance the identified algorithms as well as implement the programme into live clinical practice in the next course of action in an attempt to boost diagnostic accuracy and patient outcomes.**

Keywords: Brain Tumor Detection, Graph Theory, Deep Learning, Mathematical Framework, MRI, Diagnostic Accuracy.

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Research Paper Open Access

Applications of Vertex and Edge Labeling in Computational Biology

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Abstract: **In this study, two basic labeling techniques, namely vertex and edge labeling techniques are investigated for their use in computational biology particularly in the solution of protein-protein interaction (PPI) networks, gene regulatory networks (GRNs), and metabolic pathway analysis. By implementing graph-based methods, we identified key proteins with high centrality measures, such as P53 (degree centrality: Among them, TP53 (eigenvalue: 0. 148) and AKT1 (betweenness centrality: 0. 089) are particularly imperative in cellular process. Community detection revealed functional modules linked to cell cycle regulation and cancer signaling, while pathway enrichment analysis in GRNs highlighted critical processes such as apoptosis (p-value: which goes up to 0. 001 for emotional state and to 0. 005 for immune response. Morphological analysis of metabolic networks revealed some of the constraints such as decrease in ATP yield because of the low activity of pyruvate kinase. These results stress the value of the models based on vertex and edge labeling for the understanding of the organization of the biological networks and their components in the context of protein-protein interactions, gene expression regulation and metabolic pathways. Combination of these methods improves knowledge about biological systems and yields useful information in some therapeutic and disease-related investigations.**

Keywords: Vertex Labeling, Edge Labeling, Protein-Protein Interaction Networks, Graph Theory, Gene Regulatory Networks, Metabolic Pathways.

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A sandwich framework effect on the conversion of cylindrical pore into slit pore and its catalytic application

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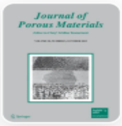
Volume 31, pages 1121–1134, (2024) Cite this article



Journal of Porous Materials
Aims and scope
Submit manuscript

Karthika Devi & Chellapandian Kannan

Abstract

CO_2 is the most prevalent greenhouse gas that traps heat and raises the global temperature. To stabilize or reduce concentrations of this greenhouse gas, it is mandatory to decompose CO_2. So we have synthesized $AlPO_4$ and ZnO_4-$AlPO_4$ catalysts using tetrapropylammonium hydroxide (TPAOH) as a template. The synthesized catalysts are systematically characterized by physicochemical methods. XRD analysis proved that $AlPO_4$ has a tetrahedral framework. But the ZnO_4-$AlPO_4$ has two separate frameworks, such as a novel ZnO_4 and $AlPO_4$, in which the ZnO_4 framework is sandwiched between the $AlPO_4$ frameworks. As of now, such kind of sandwich framework has not yet been reported. Textural evaluation shows that there is a formation of two types of pores, namely cylindrical ($AlPO_4$) and slit-shaped pore (ZnO_4-$AlPO_4$). The conversion of

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Next-generation offloading using hybrid deep learning network for adaptive mobile edge computing

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Department of Information Technology, Noorul Islam Centre for Higher Education, Kanyakumari, India

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ABSTRACT

Deploying mobile application tasks that require a lot of computing and are time-sensitive to distant cloud-based data centers has become a popular method of working around the limitations of mobile devices (MDs). Deep reinforcement learning (DRL) techniques for offloading in mobile edge computing (MEC) environments struggle to adapt to new situations due to low sample efficiency for each new context. To address these issues, a novel computational offloading in mobile edge computing (COOL-MEC) algorithm has been proposed that combines the benefits of attention modules and bi-directional long short-term memory. This algorithm improves server resource utilization by lowering the cost of assimilating processing latency, processing energy consumption, and task throughput of latency-sensitive tasks. The experiment's findings show that, when used as intended, the recommended COOL-MEC algorithm minimizes energy consumption. When compared to the current deep convolutional attention reinforcement learning with adaptive reward policy (DCARL-ARP) and DRL techniques, the energy consumption of the proposed COOL-MEC is decreased by 0.06% and 0.08%, respectively. The average time per channel utilized for the execution of the proposed COOL-MEC also decreased by 0.051% and 0.054% when compared with existing DCARL-ARP and DRL methods respectively.

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1. INTRODUCTION

The internet of things (IoT) smart mobile device (SMD) is a powerful computing device that enables smart networking [1], [2]. An emerging technology called the IoT enables real objects, including cars and home appliances, to interact and even converse with one another [3]–[5]. Simultaneously, SMDs are frequently used to implement applications like virtual reality and interactive online gaming that demand supercomputing capacity, extremely low latency, and perpetual access rights [6], [7]. On the other hand, given that SMDs are portable, their small size results in higher energy consumption, lower processing power, and smaller storage capacity [8]. Many apps are exceedingly difficult to deploy because of this SMD constraint [9]. To overcome these restrictions, SMD uses a wireless network to connect to a remote cloud and moves computational functions to the cloud [10]. However, most sizable data centers housing cloud computing resources remotely are situated at a considerable distance from the bulk of clients [11]. Because of this, SMD will take longer to unload and consume more energy during the process [12].

Mobile edge computing, or MEC, has been developed as a recent solution to the previously described problems. Edge servers, frequently referred to as compute nodes, are dispersed throughout the network when using MEC [13]. Edge servers are thus situated closer to users than independent cloud servers and are capable

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Conference Paper

Mitigation of SQL Injection Attacks Through Machine Learning Classifier

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Chapter | PDF Available

MRI Denoising with Residual Connections and Two-Way Scaling Using Unsupervised Swin Convolutional U-Net Transformer (USCUNT)

July 2024
DOI:10.1007/978-981-97-2004-0_30
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Home > Distributed Computing > Blockchain

Article | Publisher preview available

An efficient byzantine consensus mechanism based on healthcare sector in blockchain

Multimedia Tools and Applications
November 2023 · 83(17):1-30
DOI:10.1007/s11042-023-17548-3

Authors:
S. Kanagasankari   V. Vallinayagi

Home > Proto-Oncogenes

Article

Deep attention based Proto-oncogene prediction and Oncogene transition possibility detection using moments and position based amino acid features

February 2024 · Scientific and technical journal of information technologies mechanics and optics 24(1):101-111
DOI:10.17586/2226-1494-2024-24-1-101-111

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