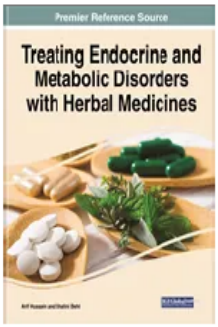

Application of Some Medicinal Plants and Their Constituents in the Treatment of Diabetes Mellitus

Raghunath Satpathy

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Abstract

The rapidly increasing incidence of diabetes mellitus as a chronic disease is becoming a serious threat to mankind health in all parts of the world. However, the currently available therapies are not of much use in prevention or reduction of disease. There are a large number of plants and natural biomolecules that have been discussed in the literature for their antidiabetic effects. Recently, the screening of many types of plant derived alpha-amylase, alpha-glucosidase inhibitors and other compounds that reduce the glucose level in the body and have fewer side effects has been successfully isolated. In this chapter, the mechanism of diabetes mellitus has been discussed. Also, the plants having anti-diabetic property along with its constituents has been presented summarized with the available literature resource. In addition to this, the common strategy that is followed for inhibition assay for an anti-diabetic compound has been discussed. Finally, future opportunities and challenges in this research area are proposed.

Chapter Preview

Top

Introduction

Diabetes mellitus commonly known as diabetes, is a metabolic disorder characterized by enhanced blood glucose level due to inadequate amount of insulin hormone secretion from the pancreatic gland (Owolabi et al., 2014). The rapid increase in the numbers of diabetes patients throughout the globe is a great concern in recent times. As per a recent report, about 177 million of the global population live with diabetes and this figure is more likely to

9 Artificial Neural Network (ANN) Techniques in Solving the Protein Folding Problem

Raghunath Satpathy

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9.1 INTRODUCTION

All functional proteins adopt a unique compact three-dimensional (3D) conformation from their unfolded amino acid sequences. Protein folding is a phenomena by which the proteins assembles itself into their correct native structure by orientaing and arranging the amino acids relative to each other.. (Figure 9.1). There are problems associated with the folding process, such as how the folding occurs, what the pathways are, what imparts overall stability after folding is over, and overall the basic rules for the protein folding, etc. So all these queries are known as the *protein-folding problem* [1–2].

The historical work regarding protein folding started with the famous experiment by Anfinsen in the year 1961on the enzyme ribonuclease A. As per Anfinsen's observation, the ribonuclease enzyme can fold spontaneously into its native stable

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Chapter

COVID-19: An Updated Insight of the Pandemic

Raghunath Satpathy and Prangya Ranjan Rout

Abstract

Novel coronavirus (SARS-CoV-2) out-broke in the city of Wuhan in China and widely spread across the globe in a pandemic manner, causing societal and economic disruptions. Though the origin of the novel virus is still a debating topic, it is certain that SARS-CoV-2 acquired human to human transmission capacity. Regardless of aggressive containment and quarantine approaches, the number of confirmed cases continues to rise and being reported due to its highly infectious nature. As of the time, there is a little scope for the antiviral drugs or vaccines for the treatment of coronavirus infection; due to the vigorous mutation rate in the viral genome. However, existing anti-parasite drugs like ivermectin and chloroquine could effectively inhibit the virus has been reported. Few of the vaccines have come up with certain degree of efficacy and many are under the clinical trial phase. The research on novel coronavirus is still in the preliminary stage. In this chapter, we systematically summarize the origin, transmission route, molecular characterization, pathogenic mechanism, contagious nature, clinical symptoms, diagnosis, treatment, mutation and infection as well as prevention strategy of coronavirus disease based on the recently available literature. In addition to this, this chapter presents updated insights of the current state of knowledge pertaining to novel coronavirus and can be referred for potential future studies.

Keywords: Novel coronavirus (SARS-CoV-2), coronavirus disease, prevention strategy, transmission capacity, drug targets, treatment methods, virus structure, mutation

1. Introduction

In December 2019, Wuhan city in China became the center of origin of the novel coronavirus disease with the acronym COVID-19 outbreak that continues to spread quickly across the globe in a very short time. Due to its severe infection rate, on January 30, 2020, World Health Organization (WHO) declared COVID-19 as the public health emergency of international concern (PHEIC), followed by a worldwide pandemic declaration on March 11, 2020. As of May 5, 2020, it has spread to 220 countries with 3665403 confirmed covid-19 positive cases. The recent data (as of June 28, 2021) show that the number of countries affected by Covid-19 is 229, with a total of 181,741,361 confirmed cases of COVID-19 and 3,936,510 deaths. It is anticipated that the full extent of spreading and severity of this 2019 novel coronavirus is yet to be seen and global control of COVID-19 will be one of the toughest challenges humanity has ever faced [1, 2]. According to the international committee on taxonomy of viruses (ICTV) classifications

Chapter 14
Application of Dehalogenase Enzymes in Bioremediation of Halogenated Pollutants: A Short Review

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ABSTRACT

The halogenated hydrocarbons have been widely used by human beings. They are xenobiotic and toxic. The microbes having a specific group of hydrolase enzymes, known as dehalogenases, that actually break the carbon-halogen bonds of the halogenated substances and subsequently convert them into their non-toxic forms. In this chapter, the categories of dehalogenase enzymes possessed by microorganisms are narrated. The overall source, mechanism of catalysis, and structural aspects of the haloalkane dehalogenase enzymes have been discussed with special focus to the bioremediation of 1, 2 dichloroethane.

INTRODUCTION

The halogenated compounds (both aliphatic and aromatic) are xenobiotic in nature and are being used widely from many years. Therefore, the progressive accumulation of these substances in the environment created a global threat to human health in recent times (Atashgahi et al., 2018; Zhu et al., 2017). The substances like dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyl (PCB), dioxins harm human health as they have been reported to be persistent (Besis & Samara, 2012; Chaudhry & Chapalamadugu, 1991; Fetzner, 2002). A basic step in the bio-degradation of organohalides is the cleavage of the carbon-halogen bond known as *dehalogenation* that is shown by a diverse group of microorganisms as described by many researchers. There are some key hydrolase group of enzymes from different microbial sources which are responsible for dehalogenation of these substances by catalysing the cleavage of carbon–halogen bonds of these molecules (Janssen, 2004; Satpathy, 2019; Satpathy et

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11 Algae-Based Industrial Wastewater Treatment Methods and Applications

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Amruta Vihar, Sambalpur, Odisha, India

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संस्कृते भारतीयज्ञानपरम्परा

(INDIAN KNOWLEDGE SYSTEMS IN SANSKRIT)

Suneli Dei
Sushree Sasmita Pati
Prasanta Kumar Sethi
Sala Besra

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❑❑

पाणिनीयव्याकरणे समान-अजादिसूत्राणां समीक्षणम्

ड. सुनेली देई*

१.० उपक्रमः

महर्षिपाणिनिना विरचिता अष्टाध्यायी संस्कृतव्याकरणवाङ्मयस्य अनुपमग्रन्थरत्नमस्ति। पाणिनेः नामानुसारम् अष्टाध्याय्याः अपरनाम पाणिनीयव्याकरणं भवति। अधुना समग्रे भारतवर्षे पाणिनीयव्याकरणस्य एका सुदृढा परम्परा प्रचलति। तथैव च सूत्रात्मकशैल्या रचितस्य पाणिनीयव्याकरणस्य अवबोधनार्थं काशिकादिवृत्तिग्रन्थानां सिद्धान्तकौमुद्यादिप्रक्रियाग्रन्थानां वाक्यपदीयादिदर्शनग्रन्थानाञ्च पठनं पाठनञ्च भवतः। संस्कृतभाषाशिक्षणे सर्वोत्तमत्वात् सिद्धान्तकौमुद्याः लोकप्रियता अनुदिनं वर्द्धते एव। अष्टाध्याय्यां बहूनि समानस्वरूपविशिष्टानि सूत्राणि दृश्यन्ते। परन्तु तेषां सूत्राणामर्थस्तु अधिकार-अनुवृत्तिसंयोगेन भिन्नः भिन्न भवति। उदाहरणस्वरूपम्-अष्टाध्यायीक्रमाङ्कं प्रति दृष्टिं न दत्त्वा एतस्मिन् विषये अनभिज्ञाः सिद्धान्तकौमुदीपाठकाः एकेन अव्ययीभावश्च इति सूत्रेण केन प्रकारेण अव्ययसंज्ञा भवति केन प्रकारेण च नपुंसकसंज्ञा भवति इति संशयं प्रकाशयन्ति। तादृशानां छात्राणां संशयमोचनार्थं शोधपत्रस्यास्य प्रस्तुतिः। अधः क्रमेण अष्टाध्याय्याः समानानाम् अजादिसूत्राणाम् अर्थभेदः प्रदर्श्यते।

१.१ अकर्मकाच्च (अ.१.३.७६, अ.१.३.३५, अ१.३.४५)

अष्टाध्याय्याः त्रिषु स्थानेषु अकर्मकाच्च इति सूत्रं दृश्यते। सूत्रमिदं स्वरूपतः यद्यपि समानं भवति, परन्तु अधिकार-अनुवृत्तिद्वारा एतेषां त्रयाणां सूत्राणामर्थः भिन्नः भिन्नः भवति।

१.१.१ अकर्मकाच्च (अ.१.३.२६) विधिसूत्रम्)

अधिकारः- प्रत्ययः (अ.३.१.१), परश्च (अ.३.१.२), आद्युदात्तश्च (अ.३.१.३), धातोः (अ.३.१.९.१)।

अनुवृत्तिः-आत्मनेपदम्[१], स्थः[२], उपात्[३]।

सूत्रार्थः-उपपूर्वात् तिष्ठतेरकर्मकादकर्मकक्रियावचनादात्मनेपदं भवति।

यथा-यावदोदनमुपतिष्ठते।

---

* सहायिका आचार्या, संस्कृतविभागः गङ्गाधरमेहेरविश्वविद्यालयः, सम्बलपुरम्।

सांख्यदर्शने मोक्षविमर्शः

दीपकसाहुः*

१.० उपक्रमः-

पुरुष-प्रकृति-विकृति-गुणादिविवेचकस्य सांख्यदर्शनस्य आदि आचार्यः कपिलः। तत्त्वसमासस्य सांख्यसूत्रस्य च ग्रन्थद्वयस्य रचनाकारः कपिलः। अतः सांख्यशास्त्रस्य प्रवर्तकः भवति कपिलमहर्षिः। कपिलमुनिः आसुरिनाम स्वस्य शिष्याय, आसुरिः पञ्चशिखाचार्याय, पञ्चशिखाचार्यः ईश्वरकृष्णाय च सांख्यतत्त्वं उपदिष्टवान्। ईश्वरकृष्णस्य सांख्यकारिका सांख्यदर्शनस्य प्रमाणिकग्रन्थः भवति।

कपिलस्य शिष्यः आसुरिः बभूव। आसुरेः शिष्यः पञ्चशिखः षष्टितन्त्रग्रन्थस्य प्रणेता बभूव। ईश्वरकृष्णकृता सांख्यकारिका प्राचीनतमा विद्यते। तत्रापि वाचस्पतिमिश्रकृता सांख्यतत्त्वकौमुदी नाम्नी टीका प्राचीनतमा। विन्ध्यवासिनो विज्ञानभिक्षुराचार्यः सांख्यदर्शनस्य पुनरुद्धारको गण्यते। अस्मिन् सांख्यसूत्रे सांख्यप्रवचनभाष्यं रचितवान्। सांख्यशास्त्रे प्रथिता आचार्याः सन्तीमे-

* कपिलः
* आसुरिः
* पञ्चशिखः
* पतञ्जलिः
* जैगिषव्यः
* वार्षगण्यः
* विन्ध्यवासी
* जनकः
* पराशरः
* व्यासः
* ईश्वरकृष्णः

---

* Guest facutly in School of Sanskrit, Gangadhar Meher University, Sambalpur, Odisha, 768001

Manusmṛti : A Dharmaśāstrika discourse of Society

Dr. Sushree Sasmita Pati*

Introduction :

The glorious area of Sanskrit literature amazingly covers every single aspect of human life. Take the examples from Vedas, Puranas, and Upanishads are the gems that give society sacred knowledge for human beings to lead a happy life and show the path to attain Purusarthas. Another aspect of Sanskrit literature is to teach human moral ethics, values, code of conduct, and laws through sutras, verses, and compositions. Society and humans of every generation very much need these.

Now imagine a society which has these ideas to follows but does not find any suitable place or guidelines or system to implement, there needs to be a system and law to make sure to balance the society. So here, the concept of Dharmasastra was born from the ideas of ancient sages to balance the rules, laws of the society to make it liveable.

Definition of Dharmasastra :

Dharmasastra term itself reflects the foundation of the cohabitation of social laws and values in human lives. It is formed by two words that are Dharma and Sastra.

The definition of "Dharma" gives a wide range of meanings in different contexts. The grammatical explanation of the word Dharma in Sanskrit is धरति लोकान् ध्रियते पुण्यात्माभिः इति वा. It means

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प्राचीनयुगे पशुचिकित्साव्यवस्था

डॉ0 सालवेस्त्राः*

भगवान् श्रीकृष्णः गोपालनस्य निपुणः परिचर्याकर्ता, संरक्षकः च आसीत्। गोकुलः मथुरा उत्तमगोजातीयानां, उच्चदुग्धस्य उत्पादनस्य, गुणवत्तायुक्तस्य दधिस्य, घृतस्य, अन्येषां च उत्पादानाम् कृते प्रसिद्धौ आस्ताम्। बुद्धः प्राचीनभारते सर्वविधपशुपक्षिणां (क्रीडासहितानाम्) महान् रक्षकः आसीत् यतः सः जनसमूहं प्रति अहिंसाया; पाठं प्रचारयति स्म। वेदेषु प्रत्यभिज्ञानं महान् वैद्यः देवः। अश्विनीकुमाराः देवानां वैद्याः स्मृताः। अश्विनीकुमारानाम् शल्यक्रिया-चिकित्सा-कौशलस्य विषये उल्लेखाः सन्ति ते च चमत्कारं कृतवन्तः, तस्य अश्वस्य स्थाने पुरुषस्य शिरः प्रतिस्थापयितुं शुक्रवन्ति स्म सम्भवति यत् ते एव वैद्याः मनुष्याणां पशूनां च परिचर्याम् कुर्वन्ति स्म, विशेषतः प्रारम्भिके वैदिककाले। अश्विनीकुमारः सुप्रसिद्धः देववैद्यः पशुचिकित्साविषये अपि निपुणः आसीत्। ते पशुचिकित्साज्ञानं दधिचिऋषितः शिक्षिन्ति स्म यः इन्द्रेश्वरात् एतत् ज्ञानं प्राप्तवान्। भारतस्य सौभाग्यं जातं यत् ५००० वर्षाणाम् अधिका पुराणी सभ्यता अस्ति, सा अपि निरन्तरता अस्ति। साहित्यस्रोतेषु वैदिकसाहित्यं प्राचीनतम् अस्ति, यस्मिन् चत्वारः वेदाः, (ऋग्वेद, यजुर्वेद, सामवेदः, अथर्ववेदः च), उपनिषदः पुराणानि, ब्राह्मणानि, महान् महाकाव्यानि च (रामायणं, महाभारतं च) सन्ति। ऋग्वेदे (२०००-४००० ई.पू.) पशुचिकित्साशास्त्रस्य साहित्यस्य अस्तित्वस्य प्रमाणं प्राप्तम् आसीत्। यदा चिकित्सकः मनुष्याणां पशूनां च अविवेकीरूपेण परिचर्याम् अकरोत् एतेषां वैद्यानाम् चिकित्सा-शल्य-कौशलं अत्यन्तं आदिमम् आसीत् अवश्यम्। यजुर्ववेदिनः गजं स्वस्य केषाञ्चन देवतानां बहुमूल्यं बलिदानं मन्यन्ते स्म। यथा-

प्रजापतये पुरुषान्हस्तिनऽआलभते वाचे प्लुषीश्चक्षुषे मशकाच्छञ्छ्रोत्राय। (यजुर्वेदः XXIV २९)

प्रजापतये च वायवे गोमृगो वरूणायारण्यो मेषो यमाय कृष्णो मनुष्यराजाय मर्कटः शार्दुलाय रोहिदृषभाय गवयी क्षिप्रश्येनाय वर्तिका नीलङ्गोः कृमिः समुद्राय शिशुमारो हिमवते हस्ति। (यजुर्वेदः XXIV ३०)।

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Yama Represents Universal Brotherhood in YOGA

Dr. Prasanta Kumar Sethi*

अयं निजः परो वेति गणना लघुचेतसाम्।
उदारचरितानां तु वसुधैव कुटुम्बकम्।।

Universal Brotherhood means the whole world is your brother and there is no difference in religion, caste and other factors. In Sanskrit, it is वसुधैव कुटुम्बकम्, which means that the whole world is one family. The concept of वसुधैव कुटुम्बकम्, originates from हितोपदेशः of Narayana Pandita, the main purpose of this text is not only to instruct the young through various stories but also it suggests universal brotherhood.

The word Universal Brotherhood is found in almost every scripts in Sanskrit text. Bhagabad Gita talks about friendship and equality. In 9th chapter of sloka no 29th it is said

समोऽहं सर्वभूतेषु न मे द्वेषोऽस्ति न प्रियः।
ये भजन्ति तु मां भक्त्या मयि ते तेषु चाप्यहम्।।[१]

I am the same to all creation. I have neither enemy nor friend. But those who worship me with devotion are in me and I am also in them. Rg Veda also states the brotherhood like, अज्येष्ठासो अकनिष्ठासः संभ्रातरो वावृधुः सौभगाय?[२] It means that all human beings are brothers. None of them is elder or younger. All are equal and they are growing for prosperity having brotherly attitude. Like Bhagvad Gita, Veda and other scripts, Yoga also states the message of Universal Brotherhood. This paper will highlight some points of

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राधामाधवसौरभम्

RĀDHĀMĀDHAVASAURABHAM

Prof. Radhamadhab Dash
Felicitation Volume

Dr. Subash Chandra Dash

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आधुनिककाले अर्थशास्त्रस्य महत्त्वम्

सुनेली देई

१.० कौटिल्यस्य परिचयः[१]

कौटिल्यः तक्षशिलायाः एकस्मिन् ब्राह्मणपरिवारे ख्रीष्टपूर्वः ४००तः ख्रीष्टपूर्वः ३२०मध्ये जन्मग्रहणमकरोदिति ऐतिहासिकाः मतं प्रददति। कौटिल्यस्य शुभनाम विष्णुगुप्तः आसीत्। यतो हि कौटिल्यस्य पितरौ विष्णोः उपासकौ आस्ताम्। कौटिल्यः चणकस्य पुत्रत्वात् तस्य अपरनाम चाणक्यः भवति। कुटलगोत्रे जन्मग्रहणत्वात् सः कौटिल्यनाम्ना ख्यातः। कौटिल्यः राजनीतौ यथा निपुणः कूटनीतौ अपि तथा विचक्षणः आसीत्। कौटिल्यः नालन्दाविश्वविद्यालये अध्ययनमकरोत्। सोऽपि तत्र आचार्यरूपेण पाठितवान्। कौटिल्यः दृढप्रतिज्ञः आसीत्। सः तत्कालीनस्वेच्छाचारिणः दुर्नीतिग्रस्तात् प्रजाप्रपीडकात् नन्दराज्ञः अपमानं लब्ध्वा तं सिंहासनात् विच्युतं कर्तुं प्रतिज्ञामकरोत्। स्वप्रतिज्ञां परिपूरयितुं कौटल्यः चन्द्रगुप्तमौर्यं माध्यमं कृतवान्। कौटिल्यस्य सहयोगेन चन्द्रगुप्तमौर्यः नन्दवंशं ध्वंसं कृत्वा मगधस्य राजसिंहासनमारूढवान्, कौटिल्यश्च तस्य प्रधानमन्त्रीभावेन दायित्वग्रहणमकरोत्। अस्मिन् समये हि कौटल्यः राष्ट्रशासनस्य समस्तविषयानेकत्रीकृत्य 'अर्थशास्त्रम्' रचितवान्।

१.१ अर्थशास्त्रम्

भारतीयसमाजराजनीतिविज्ञानक्षेत्रे उपलब्धेषु ग्रन्थेषु कौटिल्येन विरचितः अर्थशास्त्रग्रन्थः सुप्रसिद्धः। अर्थशास्त्रकारः कौटिल्यः स्वयम् अर्थशास्त्रस्य अर्थनिरूपणं कृत्वा कथयति-'मनुष्याणां वृत्तिरर्थः, मनुष्यवती भूमिरित्यर्थः, तस्याः पृथिव्याः लाभपालनोपायः शास्त्रमर्थशास्त्रमिति'।[२] अत्रार्थशब्दस्यार्थः राजाप्रजयोरर्थो विद्यते, इत्थमर्थशास्त्रस्याभिव्यक्तिः सा विद्या विद्यते, या राजा राष्ट्रं च समृद्धिसम्पन्नं करोति। अर्थशास्त्रे राज्ञः विश्वात्मिकायाः प्रगतेः अभ्युदयस्य च योजनाः प्रस्तूयन्ते। इत्थं कौटिल्यमर्थशास्त्रम् तथाविधो ग्रन्थो विद्यते यत्र समेषां राजोचितानां कर्मणां समालोचना कृता वर्तते। कौटलीयार्थशास्त्रस्य विषयाणां विवरणमित्थं वर्त्तते। अर्थशास्त्रे पञ्चदशाधिकरणानि अशीत्यधिकैकशतसंख्यकानि प्रकरणानि पञ्चाशतोत्तरैकशतसंख्याकाः अध्यायाः षट्सहस्रश्लोकाश्च सन्ति।

कौटिल्येन विरचितम् अर्थशास्त्रं भारतीयसमाजशासनतत्वयोरूपर्य्याधारितम्। अर्थशास्त्रे पञ्चदशअधिकरणानि सन्ति। तानि भवन्ति–प्रथमाधिकरणम्-विनयाधिकारिकम्, द्वितीयाधिकरणम्–अध्यक्षप्रचारः, तृतीयाधिकरणम्-धर्मस्थीयम्, चतुर्थाधिकरणम-कण्टक- शोधनम्, पञ्चमाधिकरणम्–योगवृत्तम्,

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2021

ICTs vis-à-vis OPAC in Libraries : A Trend Study in Higher Education Institutions in Odisha

Pijushkanti Panigrahi [1]
Rosalien Rout [2]

Abstract: *The rapid growth and developments in technologies over the last few decades have significantly influenced the functioning of libraries. The result is evident in the transformation of traditional libraries into electronic and digital libraries. In an academic setup for the dissemination of information and establishment of a strong network of systems, library automation is immensely important. Thus, for effective management of the growing number of information resources (like print and electronic) as well as the increase in users who seek a variety of information necessitates for an automated library. Although, the concept of 'library automation' is not new in the state of Odisha, still, it is a major topic of discussion. Hence, this paper looks into the matter of library automation in higher educational institutions in Odisha and sketches the growth and development of higher education institutions as well as depicts to what extent higher educational institution libraries are automated in Odisha. It also highlights the type of software used for library automation and availability of OPAC/Web OPAC system in the libraries.*

Keyword: ICT, OPAC, Library, Higher Education, Odisha

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INDIAN CULTURE

An Overview

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7

Indian Culture and Heritage

Dr. Sanjukta Padhi

Abstract

India is a country that boasts of a rich culture. The culture of India refers to a set of minor unique cultures. The culture of India comprises of clothing, festivals, languages, religions, music, dance, architecture, food, and art in India. Most noteworthy, Indian culture has been influenced by several foreign cultures throughout its history. Also, the history of India's culture is several millennia old. Indian culture is really an outcome of continuous synthesis and has absorbed many external influences within the course of long journey of history. The first stirring of civilization occurred amongst the people of India some 4,000 years before the birth of Christ. From those past till recent past, we were exposed to unbroken sequence of civilizations. It is only the dynamism and the flexibility of Indian culture that enabled it to survive these foreign invasions and retain its originality and traditional character even after imbibing the best of those external influences. Indian people, naturally tolerant and fatalists, didn't at any time ridicule the traditions of foreign civilizations. On the opposite hand, Indian mind has assimilated much of the thinking of the opposite cultures, thus enriching it and thereby becoming unique in its character.

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4

Mental Health Issues During And After Covid-19 Pandemic: A Micro-Level Enquiry

❑ *Dr. Sanjukta Padhi*
Dr. Kishore Kumar Biswal

Introduction

The COVID-19 Pandemic or the Coronavirus disease 2019 has been profoundly affecting people's psycho-social and economic life of affecting countries in particular and around the globe in general. It has brought about a complete change in our psychological environment due to lockdown, shutdown, social distancing and restriction on our physical mobility. This is a significant threat to our mental health. People from all sections of society, irrespective of their socio-economic status and age group, are not free from mental agony due to this pandemic situation. There are numerous mental health threats associated with the current pandemic and subsequent restrictions. This pandemic has led to reorganizing our lifestyles at the home, office, and marketplace, everywhere. The widespread causes of a mental health crisis or psychological stress during this pandemic are fear of being infected by the virus, fear of losing a job or employment, fear of losing livelihood, fear of being socially excluded, feeling of helplessness, loneliness, boredom etc. Therefore, coping with the mental health issues associated with the COVID-19 pandemic as the coronavirus pandemic rapidly sweeps across the planet is the most critical challenge before we are. At this juncture, people across the globe are experiencing a kind of psychological crisis because of fear, anxiety, worry, distress concern, and stress factors, which

THE ROLE OF NEED SALIENCY THEORY IN UNIVERSITY TEACHERS

Author

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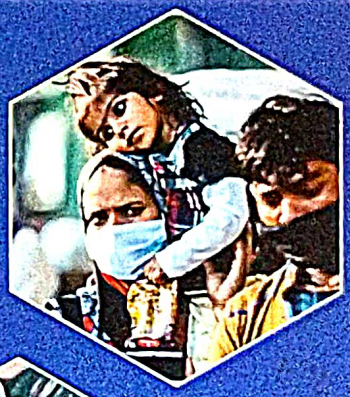
CHANGING DIMENSIONS OF HUMAN SECURITY IN CONTEMPORARY WORLD



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She published "Italian language for Political Science", "Women Identity Representation in the Romanian Culture", "Lingue diverse per scopi diversi: linguaggi specialistici e settoriali", "L'italiano per modi di dire. Campi semantici di riferimento: Il corpo umano", „Quaderno operativo di linguaggi specialistici e settoriali". „Eserciziario d'italiano per modi di dire: Il corpo umano"; WomanScape.com celebrated her on January 2019.

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Dr. Aurora Martin & Dr. Nandini Basistha

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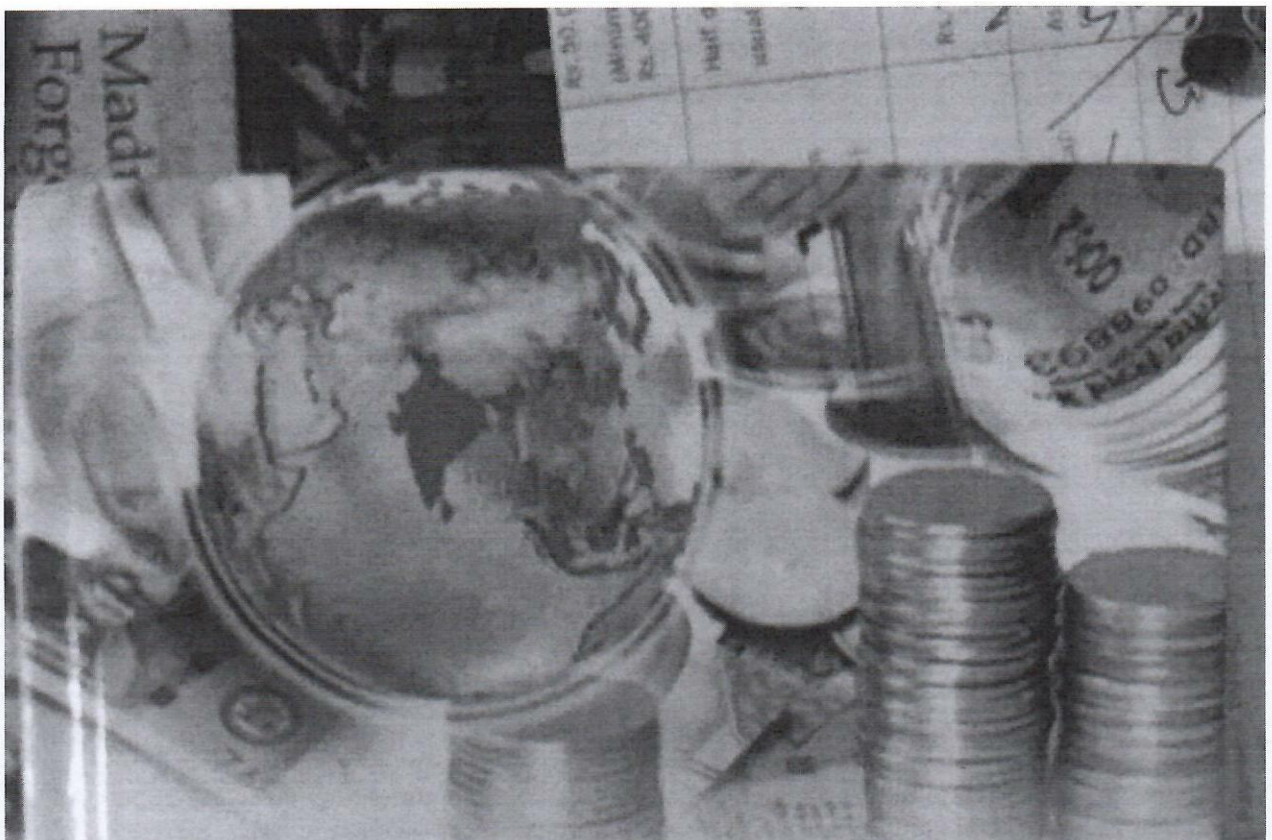

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Chapter 18
Machine Automation Making Cyber-Policy Violator More Resilient: A Proportionate Study

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ABSTRACT

Cybersecurity is of global importance. Nearly all association suffer from an active cyber-attack. However, there is a lack of making cyber policy violator more resilient for analysts in proportionately analyzing security incidents. Now the question: Is there any proper technique of implementations for assisting automated decision to the analyst using a comparison study feature selection method? The authors take multi-criteria decision-making methods for comparison. Here the authors use CICDDoS2019 datasets consisting of Windows benign and the most vanguard for shared bouts. Hill-climbing algorithm may be incorporated to select best features. The time-based pragmatic data can be extracted from the mainsheet for classification as distributed cyber-policy violator or legitimate benign using decision tree (DT) with analytical hierarchy process (AHP) (DT-AHP), support vector machine (SVM) with technique for order of preference by similarity to ideal solution (SVM-TOPSIS) and mixed model of k-nearest neighbor (KNN AHP-TOPSIS) algorithms.

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CHAPTER 24

PREDICTIVE ANALYSIS ON REAL-TIME MEDICAL DIAGNOSIS OF BRAIN TUMOR USING MACHINE LEARNING

Dillip Narayan Sahu & Madhumita Panda

ABSTRACT

Artificial intelligence is broad field branch in computer science, in manufacturing smart machines those will have human like intelligence or perform human like actions. In medical sciences, Artificial Intelligence can be used as a tool for getting data of a patient's health condition and by analysing those data they can diagnose the disease very efficiently and accurately. As per the statistical data, more than 2600 Indian children has been suffer from the disease Brain Cancer every year, which is the most common cancer among kids in India. Because of an abnormal cell generated at any part of the brain, it is very difficult for the medical sciences to predict and identify efficiently for the cancerous disease in the brain and also the stage. In this chapter, we have shown a clear picture on the predictive analysis on medical diagnosis of the disease Brain Tumor using Machine Learning algorithms using which patients may get accurate data so as to diagnose better for their early treatment.

Keywords- *Algorithm, Classifier, Machine Learning, Tumor, Weka.*

INTRODUCTION

Learning is an ongoing process. Learning is the constructing or modifying some representations of what is being experienced. –By, Ryszard Michalski

Learning is making useful changes in our minds. –By, Marvin Minsky

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Abstract:
The Internet of Spatial Things (IoST), continuously generates a large volume of geospatial data from a large number of connected smart devices. Cloud computing is inefficient to respond to IoST because of latency concern. Fog computing allows geospatial data processing as well as geospatial storage close to IoST devices and addresses this concern. This fog computing-based GIS model i.e. FogGIS is assisting to the cloud for invoking various geospatial web services. In many scenarios the service requests arrive to the fog layer and waits in a queue due to the current workload of fog servers. When all the Virtual Machines (VMs) are congested (busy), the arrived tasks are queued in the fog buffer until the fog servers becomes available to process the service. This creates the possibilities of task reneging or dropping. Reneged or dropped tasks could be resubmitted if the tasks were not dropped due to security reasons. In this paper, it experiments the performance of the fog layer based on the task arrival and the buffer size of the system using M/M/c/N Queuing theory. It also offers numerical illustrations to demonstrate the application of task reneging and feedback on the parameters such as queuing delay, probability of immediate service as well as probability of task rejection.

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Contents

I. Introduction

Fog computing is one of the new computing paradigms which delivers as an assisted technology for cloud computing [1]. This technology can play a key role for handling large amount of geospatial data in geospatial cloud computing environments. Fog nodes are handled efficient for storing and analysis of geospatial big data by the help of Internet of Spatial Things (IoST) [2][3]. The fog computing handles the large amount of work in the data centers over network particularly geospatial cloud environment. Geospatial Data are reproduced at several sites of the networks due to the interaction between mist and IoST [4][7]. The support of geospatial data recoveries is carried out by the various geospatial cloud providers [5]. In geospatial cloud computing environment, it can deliver various geospatial web services for eospatial data storage, analysis, and visualization. In client tier layer, various users have sent the different tasks to the cloud layer for accessing or retrieving the geospatial web services via fog layer [6]. When a task waits in the queue more than its timeout time or deadline, the task is reneged or dropped or the queue is full. If the tasks are not reneged because of security reasons, it may be resubmitted. Reneging is the dropping of the tasks if the queue is full and if the task is resubmitted again after dropping, it is termed as feedback [8][9][11]. Task reneging has been examined in [13] using Markovian model in cloud computing without resubmission.

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