Criterion 3

3.3: Research Publication and Awards

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

SR. No.	Name of the teacher/Author	Title of the book/chapters published or Conference Name	Title of the paper	Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Page No.
1	Dr. Swati Nitin Shekapure	1st Edition Data Science Techniques and Intelligent Applications	Chapter 13: Data Analysis for Technical Business Incubation Performance Improvement	2021-22	9781032254494	MMCOE	3
2	Dr. Harmeet K. Khanuja	International Virtual Conference on emerging trends in Engineering and Management	Web Application security scanning using ML	2021-22	2394-2320	MMCOE	8
3	Ms. Geetha R. Chillarge	IC2ST-2021: International Conference on Convergence of Smart Technologies	Hassle Free and Secure Property Registration	2020-21	2005-4262	MMCOE	10
4	Ms. A. A. Shaikh	International Conference on Recent Advances in	Anomaly based Intrusion Detection System using Deep	2020-21	978-1-5386-3422-6	MMCOE	12

		Computational Techniques : ICRACT 2020	learning methods				
5	Ms. S. B. Jadhav	2020 Second International Conference on Inventive Research in Computing Applications (ICIRCA)	Automated surveillance for high altitude regions	2019-20	978-1-7281-4042-1	MMCOE	14
6	Dr. H.K.Khanuja	Digital Forensics and Forensic Investigations	Monitor and Detect suspicious Transactions with Database Forensic Analysis	2019-20	9781799830252	MMCOE	16
7	Prof. S. B. Jadhav	2018 Fourth International Conference on Computing Communication Control and Automation (ICCUBEA)	Parallel Crawling for detection and removal of Dust using Duster	2018-19	978-1-5386-5257-2	MMCOE	19
8	Dr. S.M. Chaware	ACM proceeding of International Conference ICBRA	Proposed Battlefield Simulator using GPU	2018-19	978-1-4503-6611-3	MMCOE	21
9	Ms. Harmeet Kaur Khanuja	Proceeding of ICCUBEA 2017	Optimal Solution Generation from Reviews andMicro-Reviews using Greedy Algorithm	2017-18	978-1-5386-4008-1	MMCOE	24
10	Ms. Preeti Joshi	International conference on advances in computing,communications & informatics (ICACCI)	Education Technology Used in Education for Making StudentOutcome of Engineering Graduates DOI: 10.1109/ICACCI.2017.8126152	2017-18	2766-0885	MMCOE	26

2021-22

1) **Chapter 13: Data Analysis for Technical Business Incubation Performance Improvement**

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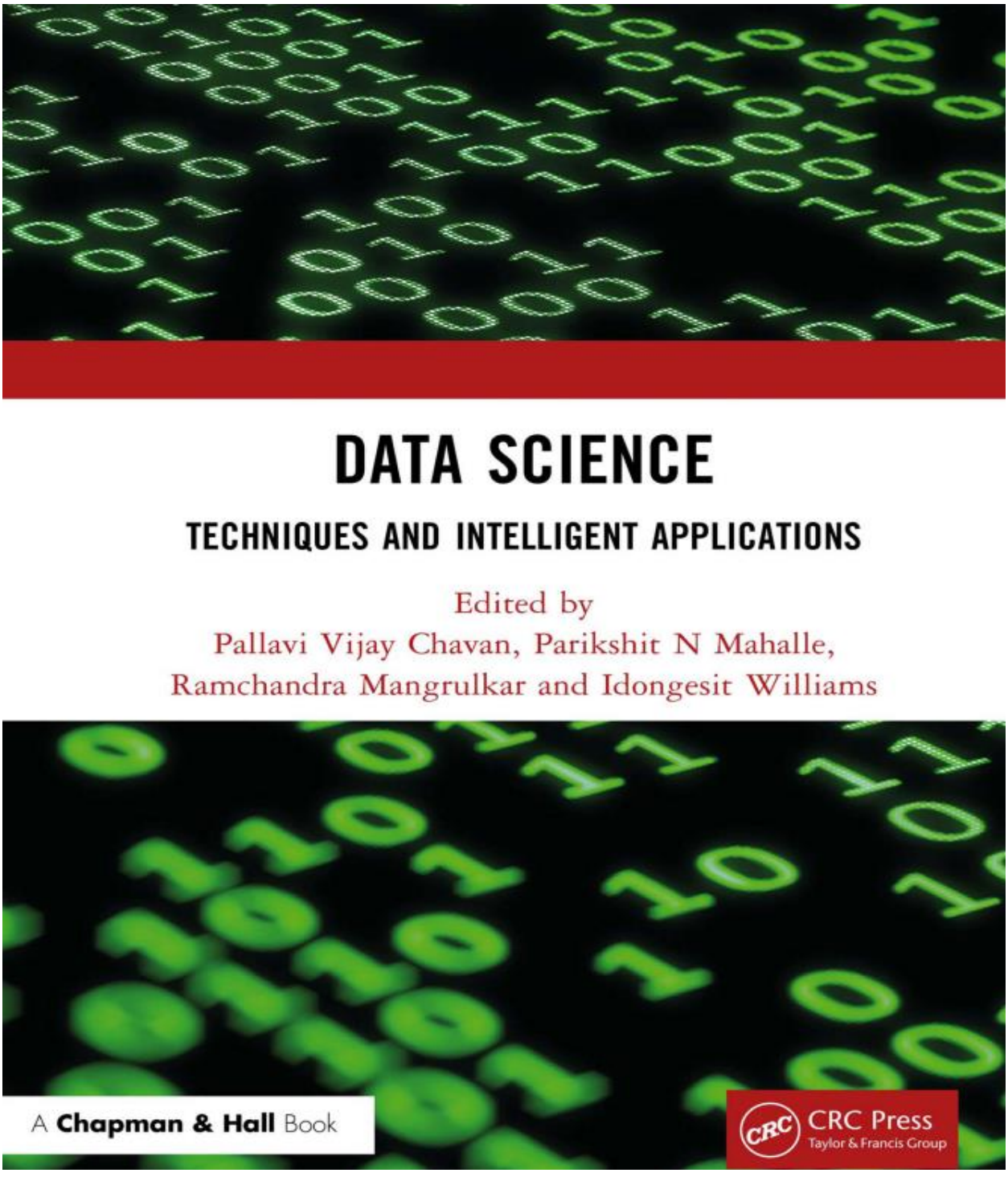

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Data Analysis for Technical Business Incubation Performance Improvement

Swati Shekapure
Marathwada Mitra Mandal's College of Engineering

Nitin Shekapure
All India Shri Shivaji Memorial Society College of Engineering

CONTENTS

DOI: 10.1201/9781003283249-13

13.1 Introduction

Encouraging company growth and addressing problems of economic development in India through improving entrepreneurial base and dispersion of intellectual capital is a matter of gravity in everyone's mind. Understanding the potential of incubators to transform the local regional and national economies and giving rise to self-sustaining communities, there is perhaps a constant need for evaluation of incubation systems not just considering their goals of producing successful firms but also concentrate renewed endeavor to evaluate incubator contributions to long term incubate graduate success, but the variance in the operability and output of incubators in a developing nation such as India and abroad demands for Indian start-up centric research to leverage Indian technical entrepreneurial ecosystem. Technical business incubator models in India need to adapt to the needs of the local Indian community, economy, and academia demands not only for the social, economic, and political betterment of the nation but also for its own growth.

This paper is essentially focus on withdrawing factors from universally applicable factors which contribute to the success of technical business incubators and identify and analytically verify factors befitting Indian conditions from the set. It runs an inductive approach accumulating factors from literature in conjunction with analytical study procedures.

India, being a fast developing, rapidly progressing nation, has been moving toward achieving the goals of macro-stability, inclusive and sustainable growth with the help of small- and medium-scale industries. This has provided an impetus to establishing nurturing environments to ensure long standing successful home-grown businesses. The cultural differences have been recognized and a collection of factors contributing to the success of the incubators in the Indian context have been presented in this study.

13.2 Evolution of Business Incubators and Their Current State

The first recorded idea of business incubators trails back to the United States of America, where Student Agencies Inc., began embracing student incubate companies. The year 1946 marked the first time that an incubator outside the student community was established. A handful of Massachusetts Institute of Technology (MIT) alumni launched American Research Development to grant risk capital to entrepreneurs [1]. This was soon followed by the Batavia Industrial Center in New York which provided multi-tenant space adding a real estate element to the concept of incubators. Until the 1970s, the incubator's cornerstone was either on technology or management; it is only from here that incubators transformed [2].

In the period between the 1970s and mid-1990s, the concept of traditional or first-generation business incubators caught up as a means to tackle unemployment by producing alternative job opportunities in the time of crisis. In fact, Lalkaka [3] rightly claims that the origin of business incubators can be found in the period between the late 1970s and early 1980s in the western industrialized countries tackling the rapid rise of unemployment following the collapse of industries and economy. These business incubators which were controlled by national or local authorities expedited economic development by promoting entrepreneurship, innovation, and employment opportunities indigenously to maximize indigenous potential and make underdeveloped and lower economic classes self-sufficient. It

2)Web Application security scanning using ML

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Web Application Security Scanning using Machine Learning

Authors : Dr. Harmeet Kaur Khanuja || Pranav Gadekar, Samruddhi Kulkarni, Shalaka Kulkarni, Shruti More

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Doi : 01.1617/vol8/iss8/pid37860

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IFERP

ISSN (Online) 2394-2320

International Journal of Engineering Research in Computer Science and Engineering (IJERCSE)

Vol 8, Issue 8, August 2021

Web Application Security Scanning using Machine Learning

[1] Dr. Harmeet Kaur Khanuja, [2] Pranav Gadekar, [3] Samruddhi Kulkarni, [4] Shalaka Kulkarni, [5] Shruti More

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***Abstract*---- Web and web-based technologies have gained popularity in recent times. The security-sensitive information and functionalities of web applications can be extracted easily. Web applications are the most common source of sensitive data, so they are more vulnerable to a large number of web-based attacks. Incorrect input validation is one of the primary reasons for vulnerabilities to take place.Though these vulnerabilities are simple in nature and usually easy to mitigate, developers are unaware of security implications of these issues. This results in more vulnerable web applications on the Internet. If these vulnerabilities remain present in the web application, then it might have some severe impacts on confidentiality of user data.**

We implemented a system which crawls the entire web application to collect all referenced URLs and scan those URLs for the most frequent vulnerabilities like SQL Injection and Cross Site Scripting. A comprehensive report for sub types of SQL injection like Error-based, Union and Boolean SQL injection along with Cross Site Scripting, is presented to users. Each of the aforementioned reports consists of URLs vulnerable to SQL Injection or Cross Site Scripting attacks.

***Keywords*— SQL Injection, Cross Site Scripting, Web Application Testing, Security Scanner, Exploitation, Code Injection, Web Security, Machine Learning, Artificial Intelligence**

I. INTRODUCTION

As of January 2020, there have been over 1.74 billion websites on the web. On an average hackers attack after every 39 seconds, that is 2,244 times a day. This gives us the idea that many websites on the Internet are vulnerable to different attacks. [1] As of the end of 2019, 42% of publicly facing websites are prone to SQL Injection and 19% to Cross Site Scripting attacks. A security researcher has earned a $25,000 bug bounty after finding a Cross Site Scripting (XSS) vulnerability in one of the most popular social media sites 'Facebook'. Another such attack, in August 2019, was on the famous coffee chain 'Starbucks' web services that created a way to access their critical database through the SQL Injection Vulnerability. [2] From this discussion, we can conclude that security has a major role to play while developing websites. Unfortunately, web developers are not aware of these security aspects resulting in more vulnerable websites. Some of the most commonly occurring ones being SQL injection and Cross Site Scripting. So we have developed a system that will find these vulnerabilities in given web applications and report them to the user of the system.

We have designed a web application that accepts the target URL from the user. Then it passes the accepted URL to a Web crawler that crawls the given URL and collects all the referenced URLs. Then it scans all collected URLs and it tests different payloads to detect the vulnerabilities using machine learning. Finally, a report is generated which contains the detected vulnerabilities.

II. RELATED WORK

- Machine Learning for Web Vulnerability Detection: The Case of Cross-Site Request Forgery published within the year 2020 by Stefano Calzavara, Mauro Conti, Riccardo Focardi, Alvise Rabitti, Gabriele Tolomei. Its main advantage is that it offers a language-sceptic vulnerability detection perspective, which hides the complexity of scripting languages as it offers a compatible interface to a large range of web applications. [3]
- An efficient algorithm and tool for detecting dangerous website vulnerabilities in the year 2020 and written by Hoang Viet Long, Tong Anh Tuan, David Taniar, Nguyen Van Can, Hoang Minh Hue. The given technique has the key feature of detecting attacks involving nested SQL queries and gives fine results. [4]
- Dimitris E. Simos, Jovan Zivanovic, Manuel Leithner proposed Automated Combinatorial Testing for Detecting SQL Vulnerabilities in Web Applications in the year 2019. It shows that our approach can effectively escape defective filtering mechanisms. [5]
- Commix: automating evaluation and exploitation of command injection vulnerabilities in Web applications published within the year 2019 by Anastasios Stasinopoulos, Christoforos Ntantogian and Christos Xenakis. It gives access to a variety of functionalities

3)Hassle Free and Secure Property Registration

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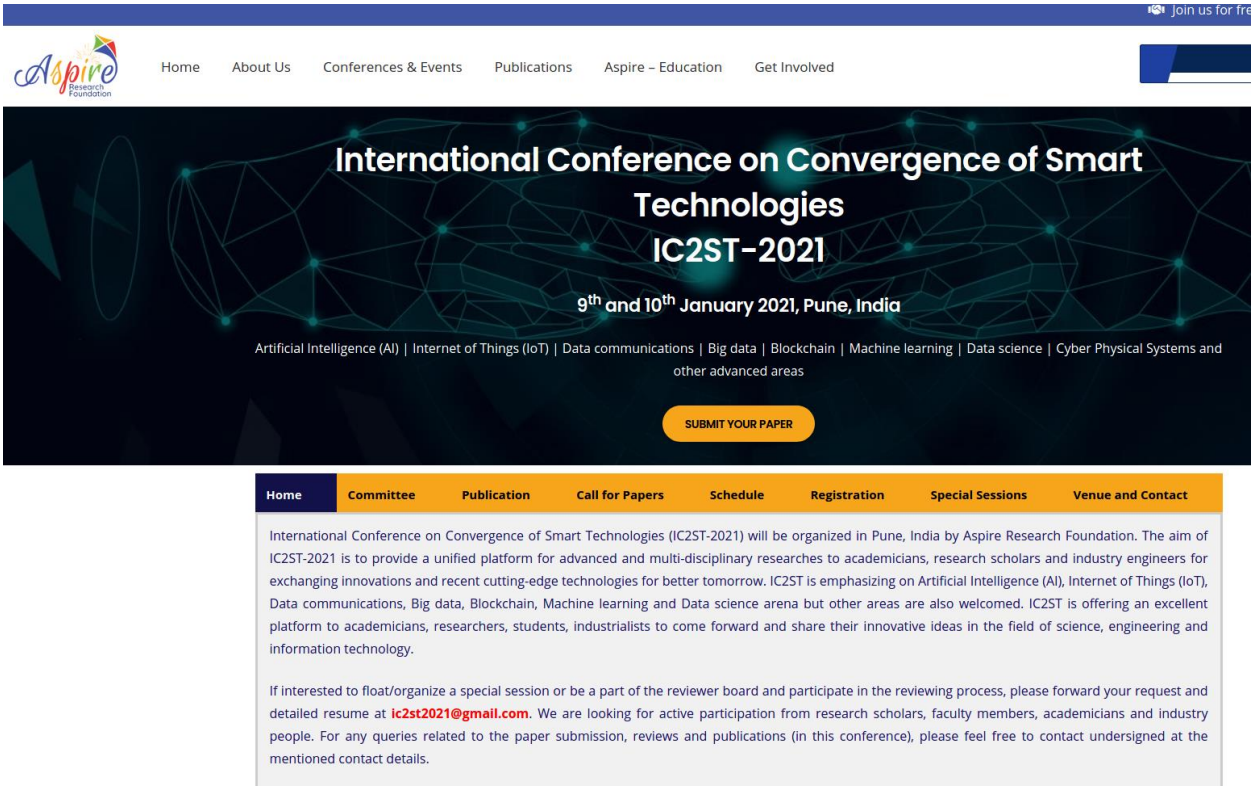

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4) Anomaly based Intrusion Detection System using Deep learning methods

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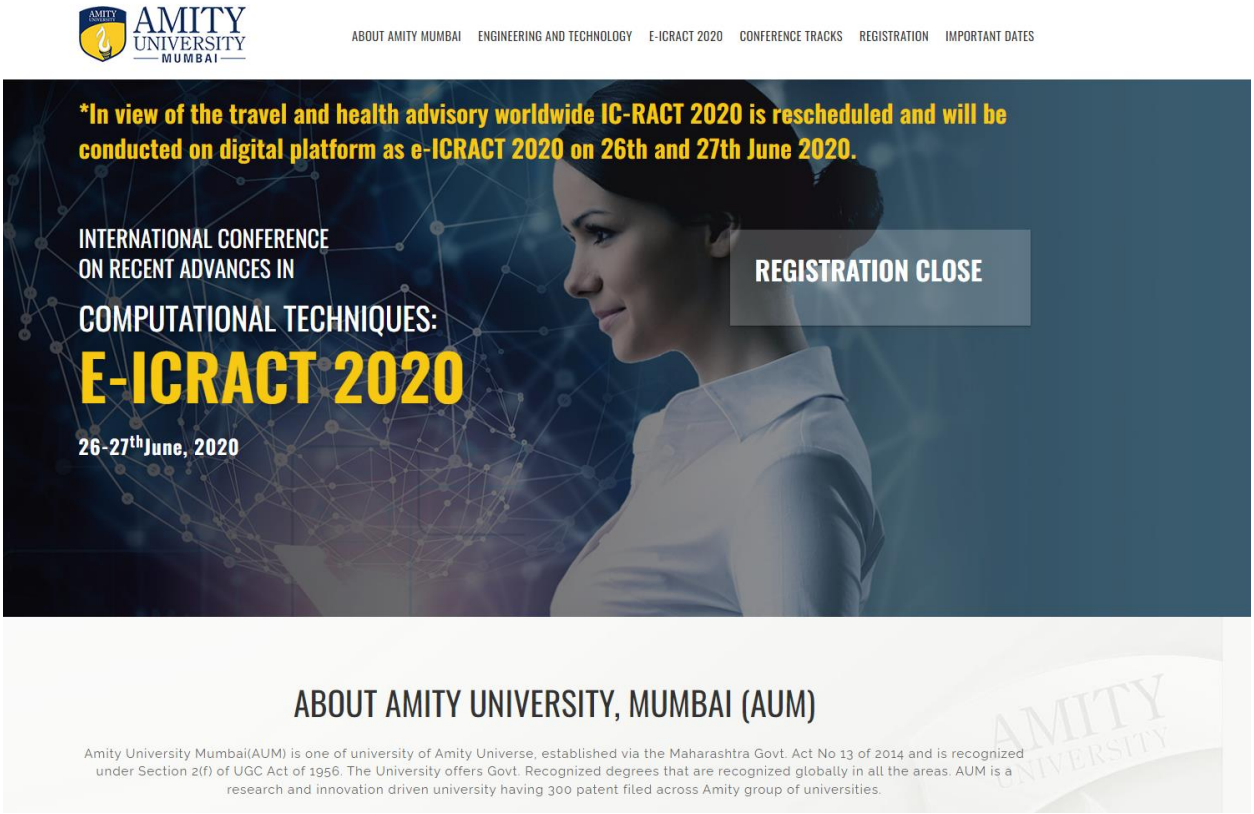

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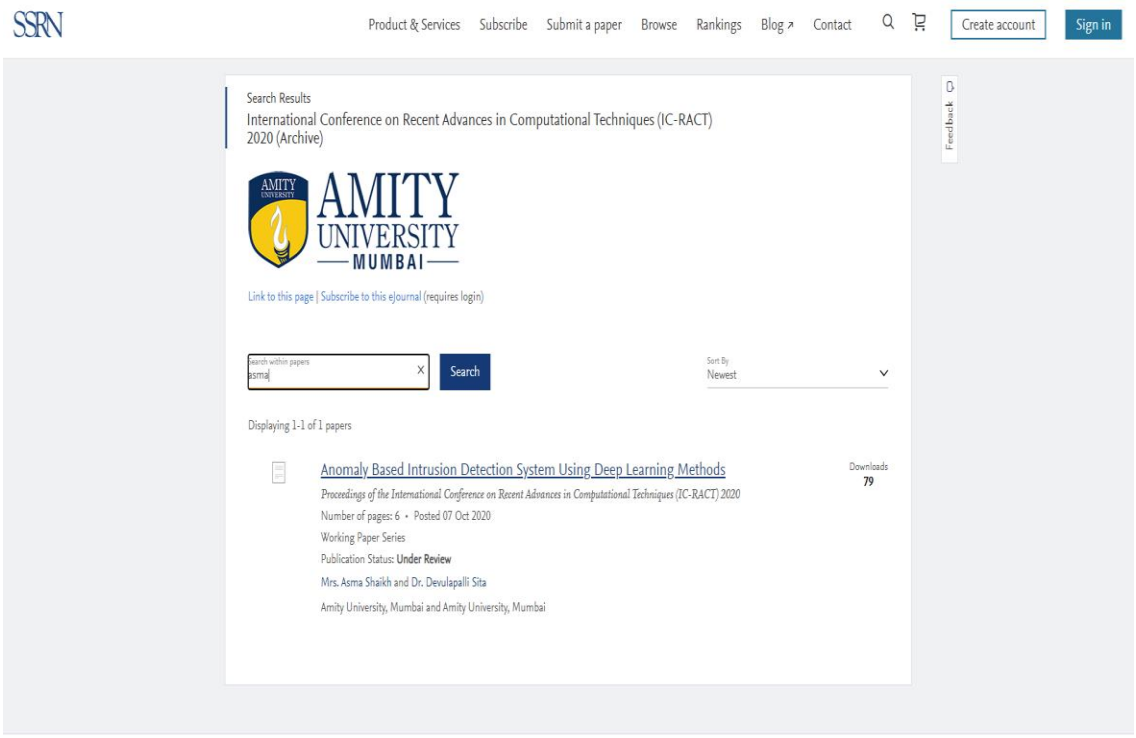

Anomaly based Intrusion Detection System using Deep learning methods

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***Abstract*: Intrusion Detection System using Deep learning technique- Convolution Neural Network(CNN) with LeeNet and ResNet50 without representational learning is proposed in this work, to achieve improved network security through improvement of detection of attacks. NSL KDD99 datasets have been used for validating the proposed system. Results of proposed model with ResNet 50 are compared with LeeNet and accuracy improvements are discussed.**

***Keywords*— Intrusion, CNN, ResNet, LeeNet**

I. Introduction

The Nature of attacks to networks ranges from Flooding attack[12], Insider attack, Cross Scripting attack[13] Script-kiddies, Denial of Service(DOS)[14] . In addition, there are skilled black-hat crackers and crackers with expertise in network penetration and exploitation of system vulnerabilities, those finding out various tricks to hack the system. Fig.1 depicts a general architecture model of an Intrusion Detection Framework positioning for protection from this kind of attacks.

Figure 1: General Architecture Model of IDS

Intrusion Detection Systems (IDS) face the challenge of detecting attacks through continuous monitoring of networks, identifying and preventing the attacks by enforcing policies and analyzing nature of attacks and depth of intrusion. IDS are classified as

1. Signature based IDS, where signature and particular pattern is analyzed to detect attack,. This patterns are stored in the IDS Rule set . Each packet is checked with stored signature to identify intrusion. So signature based IDS system is helpful to detect only known attacks.
2. Anomaly based IDS, where, identifying abnormal behaviour of intruders which deviates from normal behavious, is used to detect attack. Anomaly based IDS are able to identify unknown attacks because it is not depends on signatures of attack already stored.

A system combining Deep learning method- Convolutional neural network(CNN) with LeeNet and ResNet is proposed in this paper. *CNN* eliminates the process of manual feature extraction by using 2D convolutional layers *and leads to* improved accuracy in the detection of intrusions. LeeNet architecture is simple CNN architecture where layers are stacked together. ResNet have added skip connection to improve accuracy. Results have been compared between LeeNet and ResNet.

II. Related Work

To detect attacks on the network different algorithms are used. Machine Learning Algorithms like Artificial Neural Networks[23][24][25], Support Vector Machine[18][21[22][25], Bayesian network[28] and Genetic Algorithms [29],. Machine learning algorithm uses Principle Component Analysis(PCA)[18][19][20][21], Random Forest[22][2][3] etc. for feature extraction.

Deep learning algorithms like Auto encoder[1], Self Taught Learning method[2], Recurrent neural networks[5]– both supervised and unsupervised are generally used in the fields such as medical image analysis, speech recognition, social network filtering, natural language processing, machine translation, material inspection and computer vision. Deep learning architectures used for detection of intrusions in the network which improved the accuracies compared to methods without using deep learning techniques.

Nathan Shone, et.al.[1], proposed unsupervised learning of feature learning to detect intrusion by using Auto encoder which is Non-symmetric for improving the detection system. Implementation on GPU enabled TensorFlow and evaluation of

5)Automated surveillance for high altitude regions

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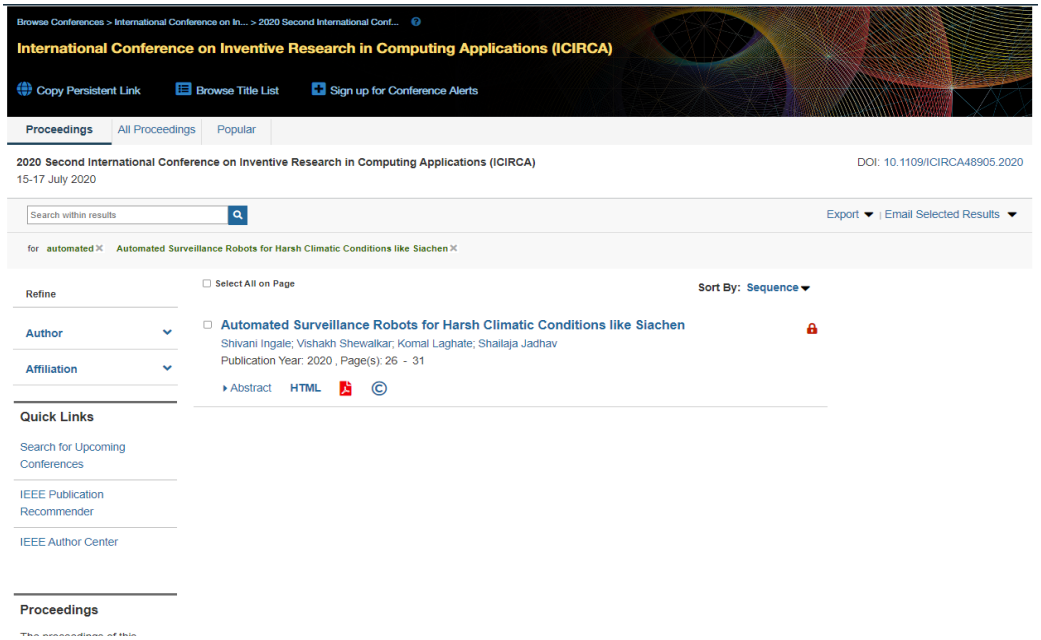

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Proceedings of the Second International Conference on Inventive Research in Computing Applications (ICIRCA-2020)
IEEE Xplore Part Number: CFP20N67-ART; ISBN: 978-1-7281-5374-2

Automated Surveillance Robots for Harsh Climatic Conditions like Siachen

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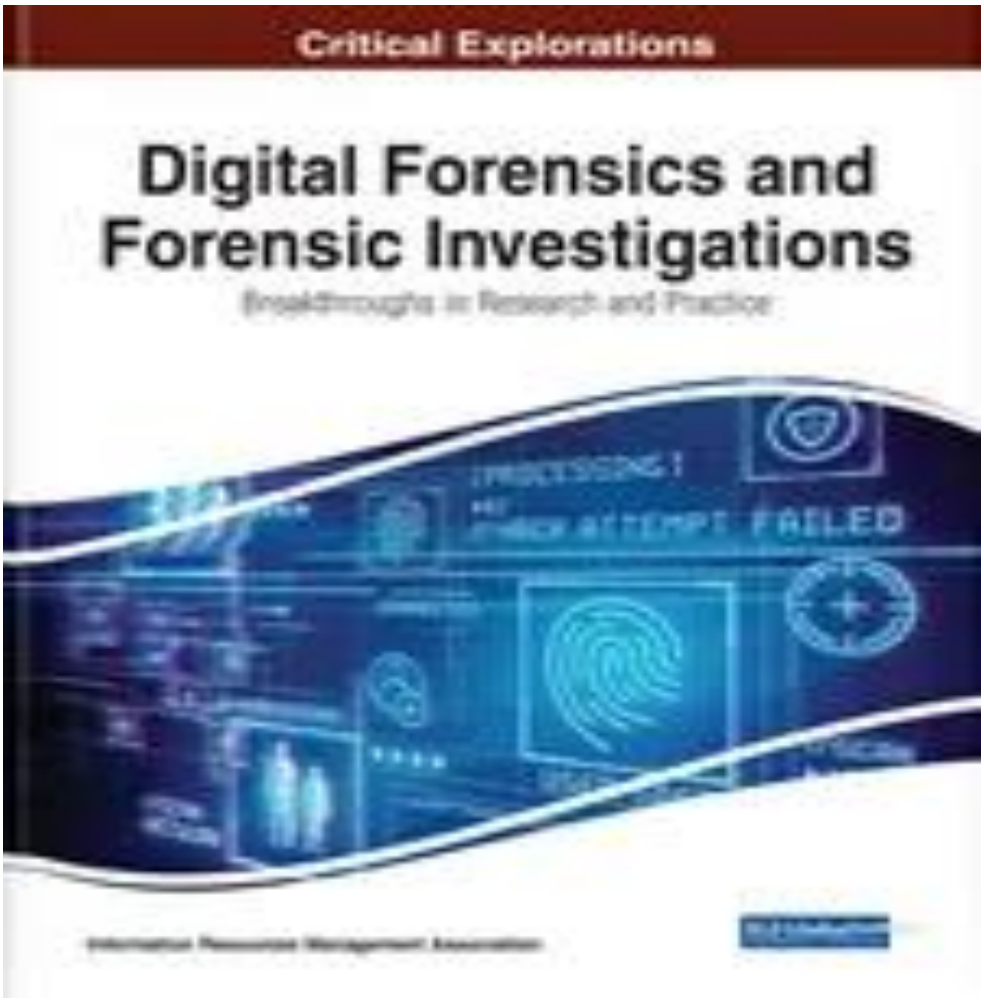
***Abstract* - Taking into consideration some geographical regions like Siachen with extremely harsh and diverse environmental conditions such as temperature ranging from -10 to -60 degrees, which result in a challenging human survival and surveillance. In this scenario, the automated surveillance robot will be considered as an efficient solution, which aims at continuous monitoring of the surrounding with least human interruption. Considering the recent developments in the surveillance robot systems, there is a necessity of developing a system which can do precise processing withstanding such harsh temperature ranges reducing the rate of soldier casualties. The proposed system implements continuous video based real time surveillance for robotic assembly made up of bullet proof and resistant material Kevlar, along with tungsten mesh for temperature regulation. With the successful communication establishment between Ground Communication Center (GCC) and the robot with a 360 degree rotating camera, the surveillance system operates in four phases: object detection (range, angle and GPS co-ordinates from the robot), object tracking and movement detection, object classification and report generation. With optimized use of resources, the increasing resource availability and load balancing of activities between Raspberry Pi and Arduino the system exhibits object tracking using co-ordinates in the frame using TensorFlow module, which can run on a low level microprocessor increasing the system's efficiency and reliability. With the reports generated consisting the assigned priorities and raised alarms, the GCC can decide further set of actions such as focusing on a particular region with suspicion having low priority assigned to it or physically deploying the soldiers for tackling the high priority situation. The hardware used involves the use of night vision Raspberry Pi camera module, GPS module, laser sensor for object detection and temperature sensors for temperature regulation. The optimized use of hardware ensures the efficient and cost effectiveness of the system. Considering the results generated from the test cases, the overall efficiency of the system comes out to be 90.27%. Thus, proposed system targets at increasing the range of surveillance with rotating camera replacing the direct exposure of the soldiers to such extreme environmental conditions with real time surveillance reducing the impacts of such conditions on soldiers' health. The results calculated from the performance metric analysis considering cost, time, efficiency and effectiveness of the system makes the system an efficient solution for the surveillance purpose reducing the rate of soldier casualties without any loss and hence can be deployed in the blind spot areas where direct human surveillance is not possible.**

Keywords: Automated, surveillance, sensor, wireless, temperature, remote control, priorities

I. Introduction

After the successful capture of Siachen Glacier as a part of Operation Meghdoot, India gained the control of 70 kilometers long Siachen Glacier which is the highest and the worst battleground on the earth located at the height of 6,000 meters with the permanent presence of military as it is a watch over point and the direct linkage between PoK and China. The environment is the biggest challenging factor to the armed forces where the temperature drops to below -60°C during winter. With the constant danger of high-speed wind, avalanches, crevasses affecting soldiers stationed to the fatal range of casualties risking the nation's strength making surveillance laborious and burdensome task to a certain extent. The government of India is spending Five crore rupees daily for the safety and food supply to the soldiers posted. The proposed system aims at incorporating temperature sensing and controlling, detection of suspicious activities, etc. The process of automation aims at minimizing human

6)Monitor and Detect suspicious Transactions with Database Forensic Analysis
Cover page



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Chapter 26

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Preview Chapter

Understanding Anti-Forensics Techniques for Combating Digital Security Breaches and Criminal Activity (pages 365-373)

Ricardo Marques (Pontifícia Universidade Católica de Campinas, Brazil), Alexandre Mota (Pontifícia Universidade Católica de Campinas, Brazil), Lia Mota (Pontifícia Universidade Católica de Campinas, Brazil)

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Muhammad Abulaish (Department of Computer Science, South Asian University, New Delhi, India), Nur Al Hasan Haldar (Center of Excellence in Information Assurance (CoEIA), King Saud University, Riyadh, Saudi Arabia)

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Monitor and Detect Suspicious Transactions With Database Forensic Analysis (pages 402-426)

Harmeet Kaur Khanuja (MMCOE, SPPU, Maharashtra, India), Dattatraya Adane (Shri Ramdeobaba College of Engineering and Management, Nagpur, India)

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Poonkodi Mariappan (SRM University, India), Padhmavathi B. (SRM University, India), Talluri Srinivasa Teja (SRM University, India)

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A New Timestamp Digital Forensic Method Using a Modified Superincreasing Sequence (pages 445-474)

Gyu-Sang Cho (Dongyang University, Youngju, Republic of Korea)

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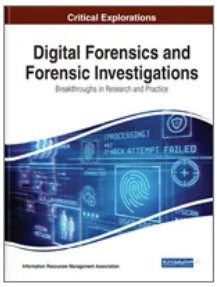

Monitor and Detect Suspicious Transactions With Database Forensic Analysis

Harmeet Kaur Khanuja (MMCOE, SPPU, Maharashtra, India) and Dattatraya Adane (Shri Ramdeobaba College of Engineering and Management, Nagpur, India)

Source Title: Digital Forensics and Forensic Investigations: Breakthroughs in Research and Practice
Copyright: © 2020 | Pages: 25
DOI: 10.4018/978-1-7998-3025-2.ch028

Abstract

The extensive usage of web has given rise to financially motivated illegal covert online transactions. So the digital investigators have approached databases for investigating undetected illegal transactions. The authors here have designed and developed a methodology to find the illegal financial transactions through the database logs. The objective is to monitor database transactions for detecting and reporting risk level of suspicious transactions. Initially, the process extracts SQL transactions from logs of different database systems, then transforms and loads them separately in uniform XML format which gives the transaction records and its metadata. The transaction records are processed with well-defined rules to get outliers present as suspicious transactions. This gives the initial belief of the transactions to be suspicious. The belief value of transactions is further rationalised using Dempster-Shafer's theory. This verifies the uncertainty and risk level of the suspected transactions to assure occurrences of fraud transactions.

Chapter Preview

Top

Introduction

The technological advancement and the globalization of online banking provisions for finance and the payment systems have widened the scope of concealing illegal money and easy mobility of funds across the borders. These are known as suspicious activities or illegal transactions incorporating money laundering. Theodosios Tsiakis et al. (2015) recommend the need to manage and regulate the risks calls for Information Technology Security Governance (ITSG) program as a means to deliver value business and mitigate Information Technology (IT) risks. Their objectives are to implement information security governance (ISG) approaches for e-banking through standards, guidelines on governance, risk management methods and internal controls for e-banking. Streff (2007) outlines the importance of IT security to banks which must comply with law and regulation of banks. D. Rafal et al. (2012) mentioned an illegal transaction of money is now a global problem which can undermine the integrity and stability of financial markets and financial institutions (FI). As per Reserve Bank of India (RBI, 2017), the Banks and FIs should exercise ongoing due diligence with respect to every customer and closely examine the transactions to ensure that they are consistent with the customer's profile and source of funds as per extant instructions. Palshikar et al. (2014) suggests that prevention, detection and control of money laundering are crucial for the financial security and risk management of financial institutions. Conversely, Anti-Money Laundering (AML, 2015) Transaction Monitoring systems produce large volumes of work items most of which do not result in quality investigations or actionable results.

To avert this government act like Sarbanes-Oxley (SOX, 2017) has given an immense impact on database auditing requirements. Patnaik et al. (2003) mentions that the survivability of database systems in case of information attacks depends exclusively on the logging mechanism. This process requires that the log must record all operations of every transaction and that the log should never be purge, but these results in enormous growth of the logs. They used logs based on transaction relationships and stored each segment as a separate file to access independently as required. As suggested by H. Khanuja et al. (2014), S. Raghavan (2013), H. Beyers et al. (2011), M. Olivier et al. (2012), database audit logs contain traces of information which can be used for investigations.

7) Parallel Crawling for detection and removal of Dust using Duster

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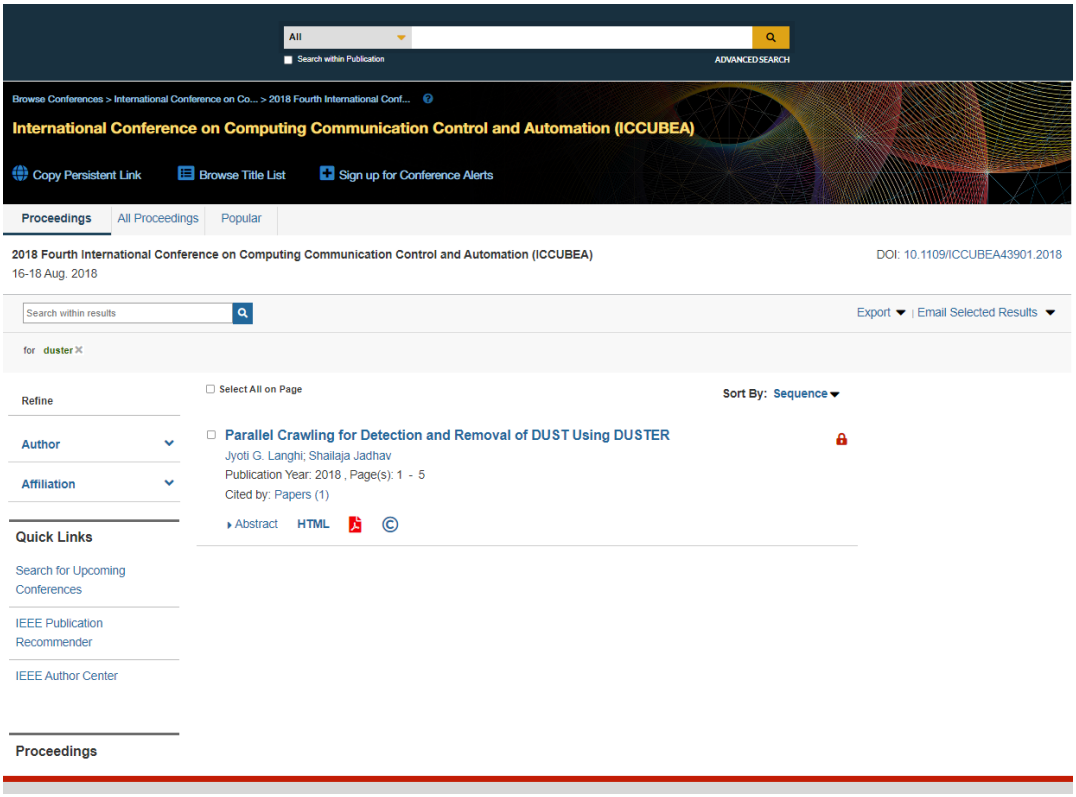

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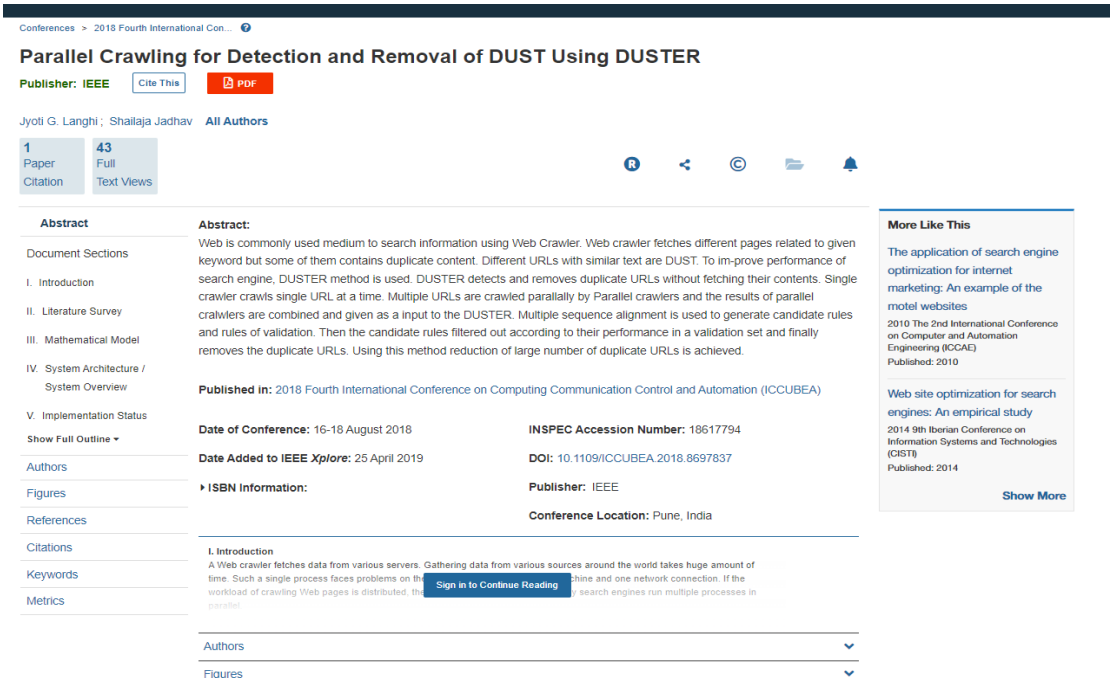

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Parallel Crawling for Detection and Removal of DUST using DUSTER

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***Abstract*—Web is commonly used medium to search informa-tion using Web Crawler. Web crawler fetches different pages related to given keyword but some of them contains duplicate content. Different URLs with similar text are DUST. To im-prove performance of search engine , DUSTER method is used. DUSTER detects and removes duplicate URLs without fetching their contents. Single crawler crawls single URL at a time. Multiple URLs are crawled parallally by Parallel crawlers and the results of parallel cralwlers are combined and given as a input to the DUSTER. Multiple sequence alignment is used to generate candidate rules and rules of validation. Then the candidate rules filtered out according to their performance in a validation set and finally removes the duplicate URLs. Using this method reduction of large number of duplicate URLs is achieved.**

Keywords—Crawler, Parallel Crawling, DUSTER.

I. INTRODUCTION

A Web crawler fetches data from various servers. Gathering data from various sources around the world takes huge amount of time. Such a single process faces problems on the process-ing power of a single machine and one network connection. If the workload of crawling Web pages is distributed , the job can be performed faster. Many search engines run multiple processes in parallel.

On the web there are different URLs that fetches the same page. These similar URLs are known as DUST. Duplicate URLs occur because of many reasons. DUST detection is important task for search engine because Crawling these duplicate URLs is a waste of resources. This results in the poor user experience. The existing system focused on document content to remove Duplicate URLs. Generation of Dynamic web pages leads to Duplication of contents. DUSTER converts duplicate URLs into same canonical form which can be used by web crawlers to avoid DUST. Instead of processing all URLs the existing system uses random sampling.In DUSTER framework, multiple sequence alignment is used to obtain a general and smaller set of rules and to avoid duplicate URLs. Multiple sequence alignment can be used to identify similar strings, so that normalization rules can be derived. More gen-eral rules can be generated using multiple sequence alignment algorithm to remove the duplicate URLs with similar text.

To fetch the URLs from the web a crawler is used in an existing system.More than one crawler can be used in distributed web crawling. Each crawler in a system acts as seperate entity and does its own indexing. Distributed system can process a growing workload as we distribute the resources in the system.Data fetched by single crawler go by single physical link. If crawling process is distributed in several processes then it makes easy to build scalable system[3].

II. LITERATURE SURVEY

DUST can be detected using two methods. First method is content based method and another one is URL based method. Content based method fetches the whole paged and full content is inspected by comparing it using syntactic or semantic evidence. In URL based method, without examining the content of the page the duplicate URLs can be find out

. In the following paragraphs some URL-based methods are focused on.

In base paper [2] the DUSTER framework is proposed. DUSTER detects duplicate URLs and removes them.This method uses normalization rules that converts distinct URLs which refer to same content to a common canonical form. Normalization rules are generated to convert all duplicate URLs into same canonical form. This makes easy to detect them. The scalability and precision can be improved using other data sets.

S. Bal and G. Geetha [3] proposed a smart distributed web crawler. In this paper the authors suggested that use of distributed cralwer is faster than that of single crawler. Distributed crawler is used to improve the scalability.

The work done by A. Agarwal and other authors [4] focuses that the basic and deep tokenization of URLs to extract all possible tokens from URLs which are mined by Rule generation techniques proposed by them for generating normalization Rules. Proposed system implements for giving output to the user efficiently and large-scale de-duplication of documents. Short Web pages does not work well and does not find out noise ratio on web pages.

A new technique SizeSpotSigs [5] is used for effective near duplicate detection algorithm considering the size of page content in mining. Proposed system implements noise-content ratio to work better. The disadvantage of this technique is that the size of the core content of Web page does not automatically or approximately decided.

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8) Proposed Battlefield Simulator using GPU
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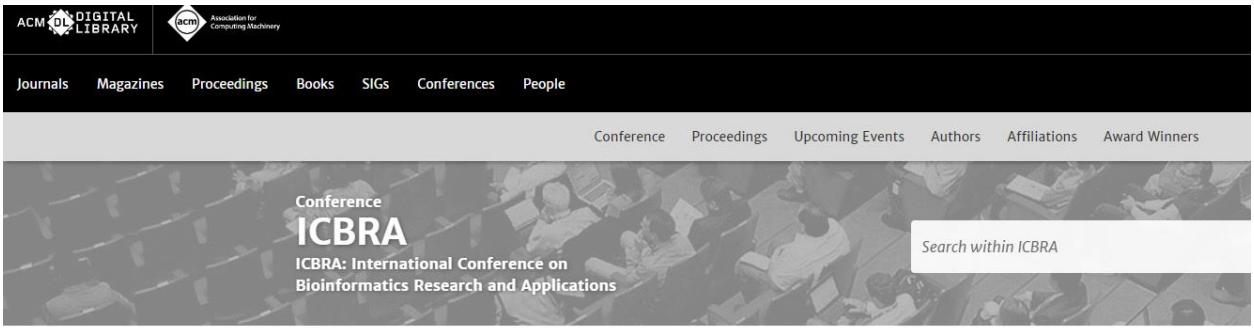

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ICBRA '18: Proceedings of the 5th International Conference on Bioinformatics Research and Applications

2018 Proceeding

Publisher: Association for Computing Machinery, New York, NY, United States

Conference: ICBRA '18: 2018 5th International Conference on Bioinformatics Research and Applications • Hong Kong Hong Kong • December 27 - 29, 2018

ISBN: 978-1-4503-6611-3

Published: 27 December 2018

In-Cooperation: City University of Hong Kong

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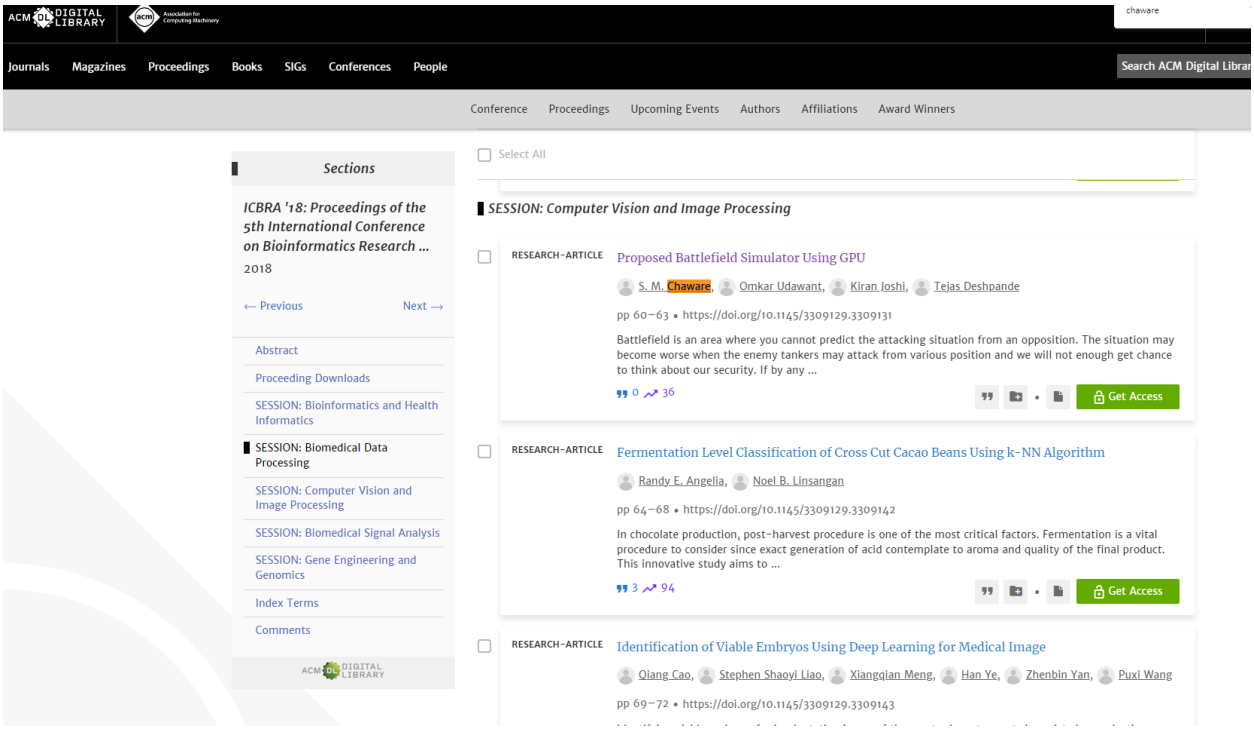

First Page:

Proposed Battlefield Simulator Using GPU

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ABSTRACT

Battlefield is an area where you cannot predict the attacking situation from an opposition. The situation may become worse when the enemy tankers may attack from various position and we will not enough get chance to think about our security. If by any mean we can analysis the situation of battling, we can easily decide the attacking strategy against any attack. This entire environment may simulate through a simulator where we can decide to attack and defend ourselves.

In this paper, we had proposed a battlefield simulator which helps in eliminating manual efforts of artillery testing and the demonstration cost required for the same. This simulator takes parameters such as type of artillery to be tested, environmental conditions and strategic planning. Damage caused by the artillery is calculated using physics formulae designed for achieving actual results. We had compared the situation with CPU and GPU processor and found that GPU is must faster than CPU and gives more accuracy.

CCS Concepts

Computing methodologies→Modeling and simulation→Simulation types and techniques→Massively parallel and high-performance simulations

Keywords

Artillery shot; Concurrent computing; Military vehicles; Missiles; Optimization; Projectile; Simulation; Visual technologies

1. INTRODUCTION

The traditional way of artillery testing requires lot of human intervention through which it is only possible to test various artilleries in various conditions before actually buying it.

ICBRA '18, December 27–29, 2018, Hong Kong, Hong Kong

ACM ISBN 978-1-4503-6611-3/18/12…$15.00
DOI: https://doi.org/10.1145/3309129.3309131

Comparing with the existing systems available in market there is no such simulator which provides projectile trajectory simulation along with actual damage calculation.

This simulator also provides actual damage calculation based on real time scenarios with actual intervening parameters. All these computing of mathematical formulation is done on GPU to achieve parallelism and using OpenCL we provide platform independence.

At the end of simulation, a report is generated which provides war strategies to counter assault enemy situations and preciseness of the projectile trajectory with some recommendations. In this system, we provide projectile trajectory which helps in analyzing the actual path being travelled by the missile after launching from barrel until it hits the target.

2. PROJECTILE TRAJECTORY

The trajectory of projectile motion is built in the starting coordinate system *Oxyz* related with the point of gun position and oriented to shot direction shown in Figure 1. The coordinates of projectile mass centre are defined by the following equations [4]:

$$\frac{dx}{dt} = V_k cos\theta cos\varphi \quad (1)$$

$$\frac{dy}{dt} = V_k \sin\theta \quad (2)$$

$$\frac{dx}{dt} = -V_k cos\theta sin\varphi \quad (3)$$

Equation (1), (2), (3) gives x, y, z coordinates respectively of the missile. These coordinates change with respect to time as the tank shell is in motion.

Here x is distance in shot plane; y is height of projectile flight; z is azimuth deviation; θ is angle of trajectory inclination; y is angle of shot direction; V_k is velocity of projectile mass centre.

Parameters of the projectile motion are defined in trajectory coordinate system $Ox_k y_k z_k$ *related* with the projectile mass centre and oriented to velocity vector shown in Figure 1

$$\frac{dV_k}{dt} = -g\sin\theta - \frac{C_{x_k} q S_M}{m} \quad (4)$$

Equation (4) is used for calculating the velocity of the tank shell. The velocity varies with respect to time; therefore, we require this differential equation to calculate the velocity at different points in the projectile.

9) Optimal Solution Generation from Reviews andMicro- Reviews using Greedy Algorithm

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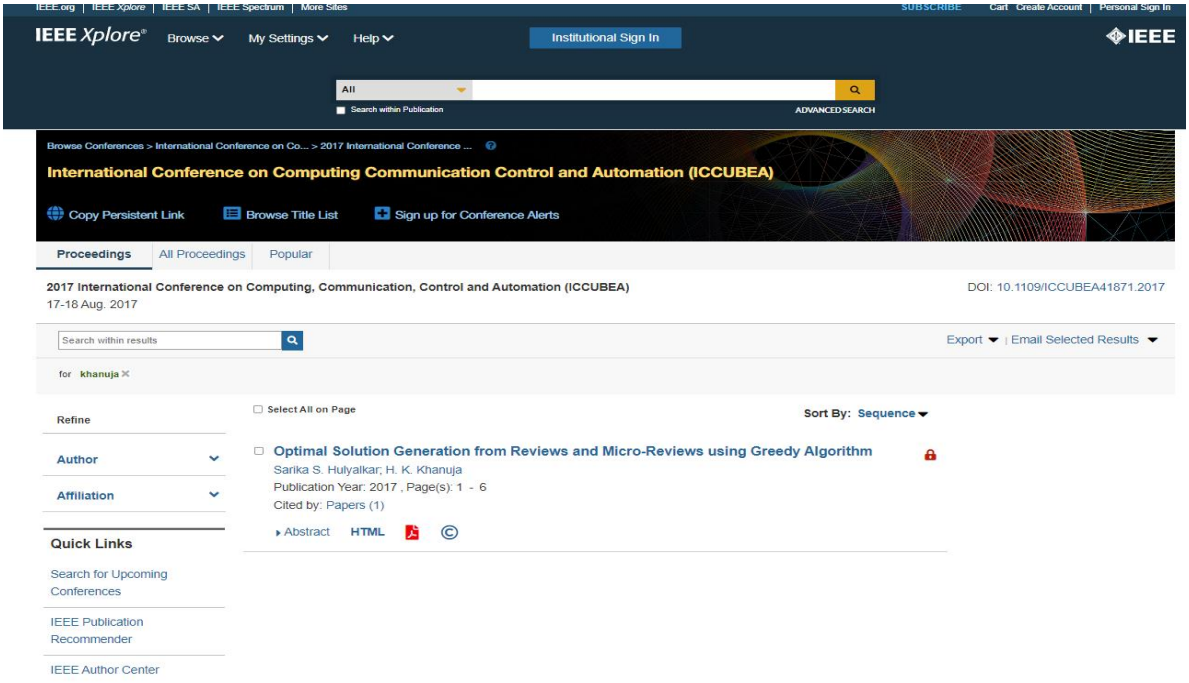

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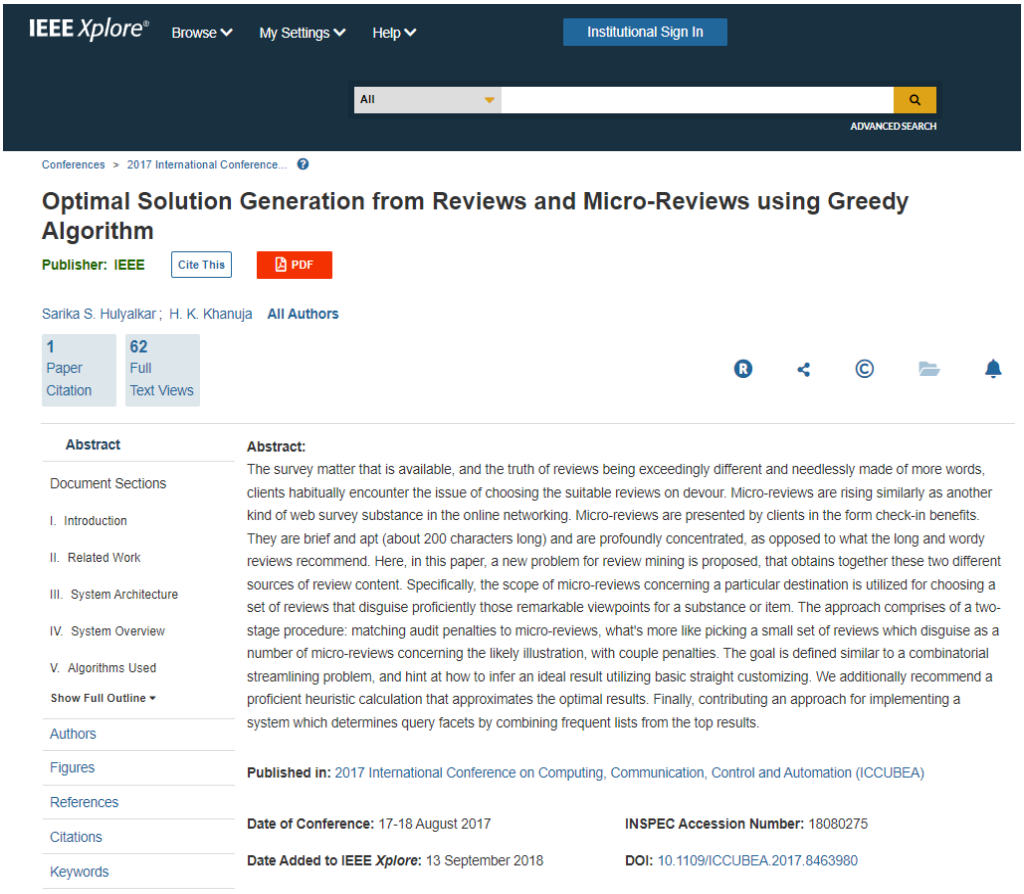

First page:

Optimal Solution Generation from Reviews and Micro-Reviews using Greedy Algorithm

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***Abstract*— The survey matter that is available, and the truth of reviews being exceedingly different and needlessly made of more words, clients habitually encounter the issue of choosing the suitable reviews on devour. Micro-reviews are rising similarly as another kind of web survey substance in the online networking. Micro-reviews are presented by clients in the form check-in benefits. They are brief and apt (about 200 characters long) and are profoundly concentrated, as opposed to what the long and wordy reviews recommend. Here, in this paper, a new problem for review mining is proposed, that obtains together these two different sources of review content. Specifically, the scope of micro-reviews concerning a particular destination is utilized for choosing a set of reviews that disguise proficiently those remarkable viewpoints for a substance or item. The approach comprises of a two-stage procedure: matching audit penalties to micro-reviews, what's more like picking a small set of reviews which disguise as a number of micro-reviews concerning the likely illustration, with couple penalties. The goal is defined similar to a combinatorial streamlining problem, and hint at how to infer an ideal result utilizing basic straight customizing. We additionally recommend a proficient heuristic calculation that approximates the optimal results. Finally, contributing an approach for implementing a system which determines query facets by combining frequent lists from the top results.**

Keywords*— *Coverage, Micro-Review, Query Facets, Review Selection, Semantic Similarity and Sentiment Similarity, Syntactic Similarity

I. Introduction

Abundant review content from various web sources can be found today. The overflow of online reviews also carries several challenges though it is useful. Readers are flooded with the overloaded data and facts, and it is becoming progressively difficult for them to choose the reviews that are commendable of their need. It is deteriorated by the size and verboseness of many reviews. Also, the content may not be completely applicable to the item for consumption or amenity being reviewed. Critics often deviate from specifying peculiar descriptions that do not provide any perception about the thing or amenity being reviewed. Also, it is difficult to conclude if a review has been given by an honest customer or by a spammer. Classifying and choosing superior, reliable reviews is a tough job and it has been the consideration of substantial quantity of study. With the current evolution of social networking and micro-blogging facilities, it is observed that a new type of online review content has evolved. This new kind of content, termed micro-reviews, is available in micro-blogging facilities that permit customers to 'check-in', showing their present position or activity. Users can check-in at native locations, for example, restaurants or coffee shops. After checking-in, a customer can drop a message, around 200 characters in length, sharing the experience, which can be briefed as a micro-review of the location.

When considering restaurants, tips are commonly recommendations (e.g., what can you order), thoughts (is it worth the money or not), or real 'tips'. For example, here are some tips for a popular burger joint in Pune. *'Veggie burger is too good. The Whooper burger is a big win and the star here'* (A recommendation), *'This is by far the best fast food burger joint in the city!!'* (An opinion), and *'Ideal outlet, ample space. If u are thinking of visiting which outlet to visit then this is the one. The burgers are priced accordingly.'* (A real tip).

Micro-reviews aid like another source of matter to assessments for customers who are concerned to discover more about a new location or entity. There are numerous benefits. First, due to the size limit, micro-reviews are brief and refined, detecting the appropriate features with respect to the location or entity. Second, as some micro-reviews are written at that instance of checking-in, they are impulsive and express the customer's instant and pure response to the experience. Third, because many customers check-in using mobile applications, these customers are perhaps at the location at the time of sharing the tips. This marks the tips to be reliable. Micro-blogging sites, if needed, screen out tips that do not have an associated check-in which helps in increasing the genuineness of the tips.

II. Related Work

The problem of selecting precise reviews has been already studied previously. All the work in previous years shows this problem is as a coverage problem. The coverage problem states that all selected reviews should cover all different aspects of the item. Tips are used as a method to generate those features of an item that the users are anxious about.

When a group of reviews is given along with group of tips about an element is also given, the system in [1] tries to

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10) Education Technology used in education for making student outcomes of engineering graduates:

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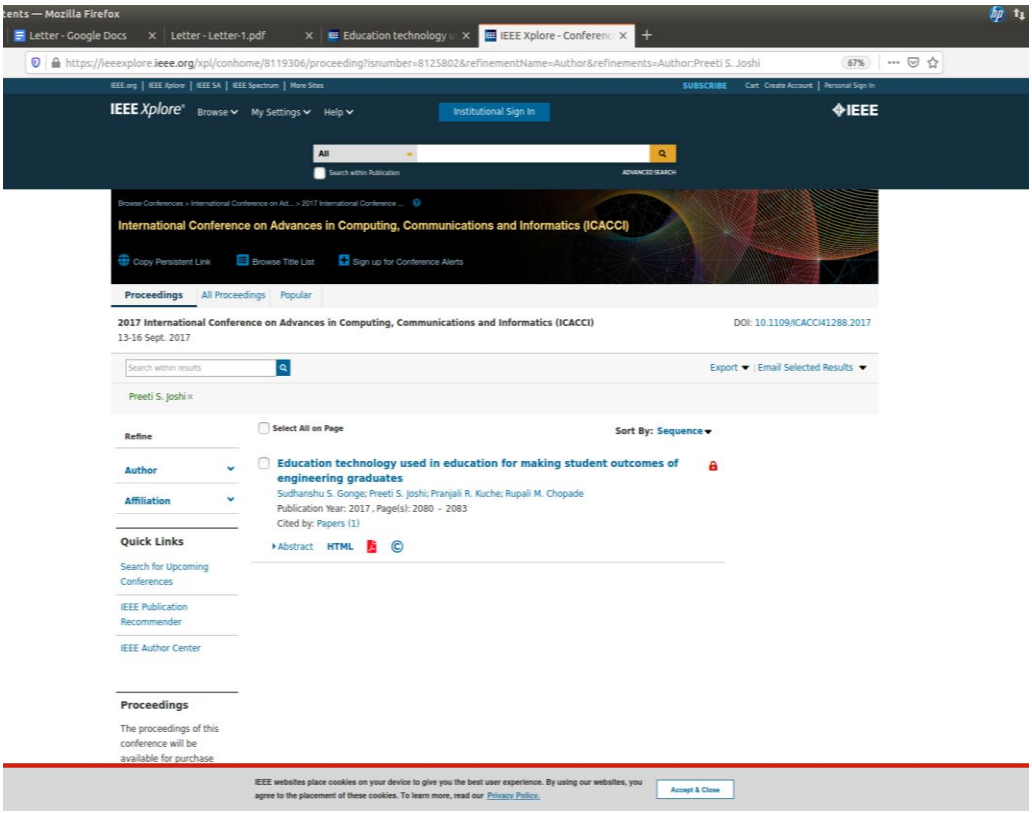

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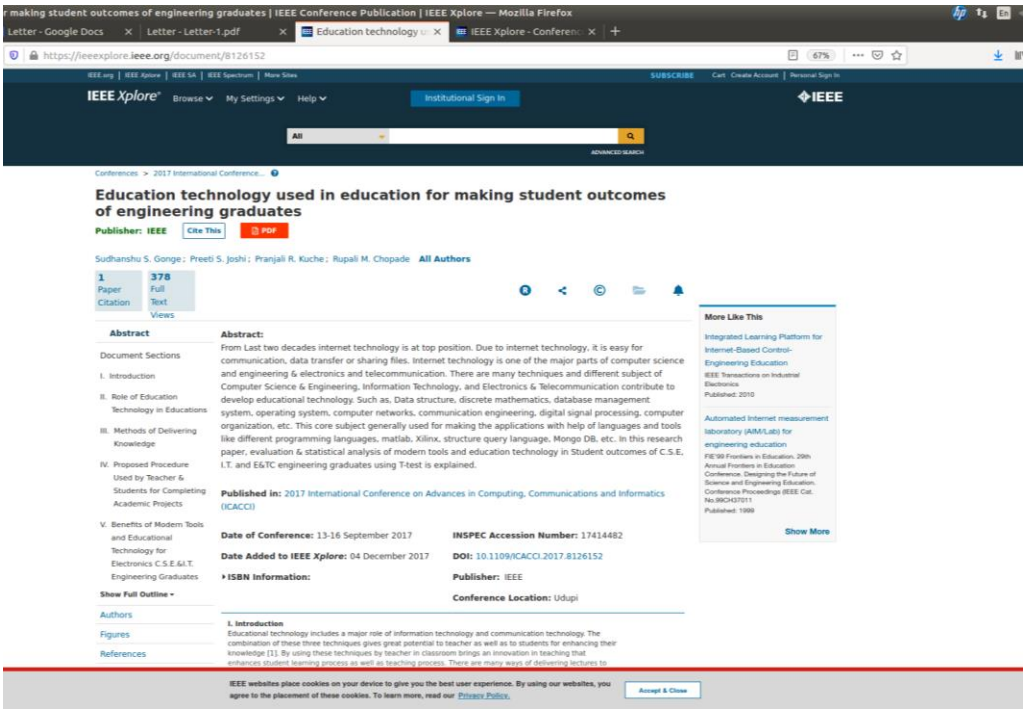
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II. Role of Education Technology in Educations
III. Methods of Delivering Knowledge
IV. Proposed Procedure Used by Teacher & Students for Completing Academic Projects
V. Benefits of Modern Tools and Educational Technology for Electronics C.S.E.&I.T. Engineering Graduates
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Abstract:
From Last two decades internet technology is at top position. Due to internet technology, it is easy for communication, data transfer or sharing files. Internet technology is one of the major parts of computer science and engineering & electronics and telecommunication. There are many techniques and different subject of Computer Science & Engineering, Information Technology, and Electronics & Telecommunication contribute to develop educational technology. Such as, Data structure, discrete mathematics, database management system, operating system, computer networks, communication engineering, digital signal processing, computer organization, etc. This core subject generally used for making the applications with help of languages and tools like different programming languages, matlab, Xilinx, structure query language, Mongo DB, etc. In this research paper, evaluation & statistical analysis of modern tools and education technology in Student outcomes of C.S.E, I.T. and E&TC engineering graduates using T-test is explained.
Published in: 2017 International Conference on Advances in Computing, Communications and Informatics (ICACCI)
Date of Conference: 13-16 September 2017
Date Added to IEEE Xplore: 04 December 2017
ISBN Information:
INSPEC Accession Number: 17414482
DOI: 10.1109/ICACCI.2017.8126152
Publisher: IEEE
Conference Location: Udupi
I. Introduction
Educational technology includes a major role of information technology and communication technology. The combination of these three techniques gives great potential to teacher as well as to students for enhancing their knowledge [1]. By using these techniques by teacher in classroom brings an innovation in teaching that enhances student learning process as well as teaching process. There are many ways of delivering lectures to
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First page:

Education Technology Used In Education for Making Student Outcomes of Engineering Graduates

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Abstract—**From Last two decades internet technology is at top position. Due to internet technology, it is easy for communication, data transfer or sharing files. Internet technology is one of the major parts of computer science and engineering & electronics and telecommunication. There are many techniques and different subject of Computer Science & Engineering, Information Technology, and Electronics & Telecommunication contribute to develop educational technology. Such as, Data structure, discrete mathematics, database management system, operating system, computer networks, communication engineering, digital signal processing, computer organization, etc. This core subject generally used for making the applications with help of languages and tools like different programming languages, matlab, Xilinx, structure query language, Mongo DB, etc. In this research paper, evaluation & statistical analysis of modern tools and education technology in Student outcomes of C.S.E, I.T. and E&TC engineering graduates using T-test is explained.**

***Index Terms*—Education, educational technology, student outcomes, C.S.E, E&TC, I.T., statistical t-test.**

I. Introduction

Educational technology includes a major role of information technology and communication technology. The combination of these three techniques gives great potential to teacher as well as to students for enhancing their knowledge [1]. By using these techniques by teacher in classroom brings an innovation in teaching that enhances student learning process as well as teaching process. There are many ways of delivering lectures to students. Such as, by using ancient method i.e. by using chalk and board, PowerPoint presentations, video lectures, lectures notes using multimedia software's helps teachers to teach subjects in a variety of learning styles [2]. Due to such educational technology, the capabilities of information technology, makes students more practical in implementing their knowledge & make them easier for learning subjects [3]. It also helps to teachers in engaging their students more in classrooms and practical laboratories. In this research work, an important role modern tools & educational technology used by teacher in their academics for producing their outcome based students of Computer Science & Engineering, Information Technology, and Electronics & Telecommunication engineering graduates students is explained[4,5].

II. Role of Education Technology in Educations

Computer in education has to play major role in education sector. Nowadays, education without computer is useless [6]. Major advantages of computer in education are describes below [7].

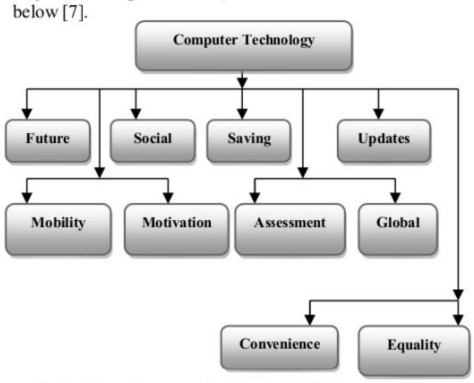

Fig. 1. Shows advantages of computer technology used in educational technology.

A. Future

In 21st century, the world has totally diverted towards technology for advancing technology for humanity. Thus,