

# INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

IJR  
CM



A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A., Google Scholar,  
Indian Citation Index (ICI), J-Gate, India [link of the same is duly available at Infilbnet of University Grants Commission (U.G.C.)].

Index Copernicus Publishers Panel, Poland with IC Value of 5.09 (2012) & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 6185 Cities in 195 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

<http://ijrcm.org.in/>

# CONTENTS

<b>Sr. No.</b>	<b>TITLE &amp; NAME OF THE AUTHOR (S)</b>	<b>Page No.</b>
1.	<b>MULTI COLONY ANT OPTIMIZATION: A NEW APPROACH TO QUERY OPTIMIZATION IN DISTRIBUTED DBMS</b>  <i>ANJALI SONI &amp; Dr. SWATI V. CHANDE</i>	1
2.	<b>A STUDY ON WORK-LIFE BALANCE IN BANKS WITH SPECIAL REFERENCE TO JODHPUR</b>  <i>Dr. KAMALJIT BHATIA &amp; Dr. SHILPI KULSHRESTHA</i>	4
3.	<b>POST MERGER PERFORMANCE ANALYSIS WITH SPECIAL REFERENCE TO WIPRO - INFOSERVER S. A</b>  <i>AKHILA N S &amp; Dr. MANOJ KUMARA N V</i>	10
4.	<b>STRATEGIC ANALYSIS ON BIG DATA IN INDIAN TECHNOLOGICAL SCENARIO</b>  <i>Dr. VAIBHAV SHARMA, SANGEETA VAIBHAV MEENA &amp; VANDANA NIGAM</i>	14
5.	<b>THE LOST BOND: A CASE ON CHILD ABUSE AND IT's SOCIO-ECONOMIC IMPACT</b>  <i>Dr. JUHI GARG &amp; RICHITA JAKHWAL</i>	18
6.	<b>HUMAN RESOURCE DEVELOPMENT IN TOURISM AND HOSPITALITY INDUSTRY: ISSUES AND CHALLENGES</b>  <i>NATARAJA T. C.</i>	21
	<b>REQUEST FOR FEEDBACK &amp; DISCLAIMER</b>	24

***CHIEF PATRON*****Prof. (Dr.) K. K. AGGARWAL**

Chairman, Malaviya National Institute of Technology, Jaipur  
*(An institute of National Importance & fully funded by Ministry of Human Resource Development, Government of India)*  
 Chancellor, K. R. Mangalam University, Gurgaon  
 Chancellor, Lingaya's University, Faridabad  
 Founder Vice-Chancellor (1998-2008), Guru Gobind Singh Indraprastha University, Delhi  
 Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

***FOUNDER PATRON*****Late Sh. RAM BHAJAN AGGARWAL**

Former State Minister for Home & Tourism, Government of Haryana  
 Former Vice-President, Dadri Education Society, Charkhi Dadri  
 Former President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

***CO-ORDINATOR*****Dr. BHAVET**

Former Faculty, Shree Ram Institute of Engineering & Technology, Urjani

***ADVISOR*****Prof. S. L. MAHANDRU**

Principal (Retd.), Maharaja Agrasen College, Jagadhri

***EDITOR*****Dr. PARVEEN KUMAR**

Professor, Department of Computer Science, NIMS University, Jaipur

***CO-EDITOR*****Dr. A. SASI KUMAR**

Professor, Vels Institute of Science, Technology & Advanced Studies (Deemed to be University), Pallavaram

***EDITORIAL ADVISORY BOARD*****Dr. CHRISTIAN EHIOBUCE**

Professor of Global Business/Management, Larry L Luong School of Business, Berkeley College, USA

**Dr. SIKANDER KUMAR**

Chairman, Department of Economics, Himachal Pradesh University, Shimla, Himachal Pradesh

**Dr. JOSÉ G. VARGAS-HERNÁNDEZ**

Research Professor, University Center for Economic & Managerial Sciences, University of Guadalajara, Guadalajara, Mexico

**Dr. RAJENDER GUPTA**

Convener, Board of Studies in Economics, University of Jammu, Jammu

**Dr. D. S. CHAUBEY**

Professor & Dean (Research & Studies), Uttaranchal University, Dehradun

**Dr. TEGUH WIDODO**

Dean, Faculty of Applied Science, Telkom University, Bandung Technoplex, Jl. Telekomunikasi, Indonesia

**Dr. S. P. TIWARI**

Head, Department of Economics & Rural Development, Dr. Ram Manohar Lohia Avadh University, Faizabad

**Dr. BOYINA RUPINI**

Director, School of ITS, Indira Gandhi National Open University, New Delhi

**Dr. KAUP MOHAMED**

Dean & Managing Director, London American City College/ICBEST, United Arab Emirates

**SUNIL KUMAR KARWASRA**

Principal, Aakash College of Education, ChanderKalan, Tohana, Fatehabad

- Dr. MIKE AMUHAYA IRAVO**  
Principal, Jomo Kenyatta University of Agriculture & Tech., Westlands Campus, Nairobi-Kenya
- Dr. M. S. SENAM RAJU**  
Professor, School of Management Studies, I.G.N.O.U., New Delhi
- Dr. NEPOMUCENO TIU**  
Chief Librarian & Professor, Lyceum of the Philippines University, Laguna, Philippines
- Dr. A SAJEEVAN RAO**  
Professor & Director, Accurate Institute of Advanced Management, Greater Noida
- Dr. H. R. SHARMA**  
Director, Chhatrapati Shivaji Institute of Technology, Durg, C.G.
- Dr. CLIFFORD OBIYO OFURUM**  
Professor of Accounting & Finance, Faculty of Management Sciences, University of Port Harcourt, Nigeria
- Dr. SHIB SHANKAR ROY**  
Professor, Department of Marketing, University of Rajshahi, Rajshahi, Bangladesh
- Dr. MANOHAR LAL**  
Director & Chairman, School of Information & Computer Sciences, I.G.N.O.U., New Delhi
- Dr. SRINIVAS MADISHETTI**  
Professor, School of Business, Mzumbe University, Tanzania
- Dr. ANIL K. SAINI**  
Professor, Guru Gobind Singh Indraprastha University, Delhi
- Dr. VIRENDRA KUMAR SHRIVASTAVA**  
Director, Asia Pacific Institute of Information Technology, Panipat
- Dr. VIJAYPAL SINGH DHAKA**  
Professor & Head, Department of Computer & Communication Engineering, Manipal University, Jaipur
- Dr. NAWAB ALI KHAN**  
Professor & Dean, Faculty of Commerce, Aligarh Muslim University, Aligarh, U.P.
- Dr. EGWAKHE A. JOHNSON**  
Professor & Director, Babcock Centre for Executive Development, Babcock University, Nigeria
- Dr. ASHWANI KUSH**  
Head, Computer Science, University College, Kurukshetra University, Kurukshetra
- Dr. ABHAY BANSAL**  
Head, Department of Information Technology, Amity School of Engg. & Tech., Amity University, Noida
- Dr. BHARAT BHUSHAN**  
Head, Department of Computer Science & Applications, Guru Nanak Khalsa College, Yamunanagar
- MUDENDA COLLINS**  
Head, Operations & Supply Chain, School of Business, The Copperbelt University, Zambia
- Dr. JAYASHREE SHANTARAM PATIL (DAKE)**  
Faculty in Economics, KPB Hinduja College of Commerce, Mumbai
- Dr. MURAT DARÇIN**  
Associate Dean, Gendarmerie and Coast Guard Academy, Ankara, Turkey
- Dr. YOUNOS VAKIL ALROAIA**  
Head of International Center, DOS in Management, Semnan Branch, Islamic Azad University, Semnan, Iran
- P. SARVAHARANA**  
Asst. Registrar, Indian Institute of Technology (IIT), Madras
- SHASHI KHURANA**  
Associate Professor, S. M. S. Khalsa Lubana Girls College, Barara, Ambala
- Dr. SEOW TA WEEA**  
Associate Professor, Universiti Tun Hussein Onn Malaysia, Parit Raja, Malaysia
- Dr. OKAN VELİ ŞAFAKLI**  
Professor & Dean, European University of Lefke, Lefke, Cyprus
- Dr. MOHINDER CHAND**  
Associate Professor, Kurukshetra University, Kurukshetra
- Dr. BORIS MILOVIC**  
Associate Professor, Faculty of Sport, Union Nikola Tesla University, Belgrade, Serbia

**Dr. IQBAL THONSE HAWALDAR**

Associate Professor, College of Business Administration, Kingdom University, Bahrain

**Dr. MOHENDER KUMAR GUPTA**

Associate Professor, Government College, Hodal

**Dr. ALEXANDER MOSESOV**

Associate Professor, Kazakh-British Technical University (KBUTU), Almaty, Kazakhstan

**Dr. MOHAMMAD TALHA**

Associate Professor, Department of Accounting &amp; MIS, College of Industrial Management, King Fahd University of Petroleum &amp; Minerals, Dhahran, Saudi Arabia

**Dr. ASHOK KUMAR CHAUHAN**

Reader, Department of Economics, Kurukshetra University, Kurukshetra

**Dr. RAJESH MODI**

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

**WILLIAM NKOMO**

Asst. Head of the Department, Faculty of Computing, Botho University, Francistown, Botswana

**YU-BING WANG**

Faculty, department of Marketing, Feng Chia University, Taichung, Taiwan

**Dr. SHIVAKUMAR DEENE**

Faculty, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

**Dr. MELAKE TEWOLDE TECLEGHIOGIS**

Faculty, College of Business &amp; Economics, Department of Economics, Asmara, Eritrea

**Dr. BHAVET**

Faculty, Shree Ram Institute of Engineering &amp; Technology, Urjani

**Dr. THAMPOE MANAGALESWARAN**

Faculty, Vavuniya Campus, University of Jaffna, Sri Lanka

**Dr. ASHISH CHOPRA**

Faculty, Department of Computer Applications, National Institute of Technology, Kurukshetra

**SURAJ GAUDEL**

BBA Program Coordinator, LA GRANDEE International College, Simalchaur - 8, Pokhara, Nepal

**Dr. SAMBHAVNA**

Faculty, I.I.T.M., Delhi

**Dr. LALIT KUMAR**

Faculty, Haryana Institute of Public Administration, Gurugram

**FORMER TECHNICAL ADVISOR****AMITA****FINANCIAL ADVISORS****DICKEN GOYAL**

Advocate &amp; Tax Adviser, Panchkula

**NEENA**

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

**LEGAL ADVISORS****JITENDER S. CHAHAL**

Advocate, Punjab &amp; Haryana High Court, Chandigarh U.T.

**CHANDER BHUSHAN SHARMA**

Advocate &amp; Consultant, District Courts, Yamunanagar at Jagadhri

**SUPERINTENDENT****SURENDER KUMAR POONIA**

## **CALL FOR MANUSCRIPTS**

We invite unpublished novel, original, empirical and high quality research work pertaining to the recent developments & practices in the areas of Computer Science & Applications; Commerce; Business; Finance; Marketing; Human Resource Management; General Management; Banking; Economics; Tourism Administration & Management; Education; Law; Library & Information Science; Defence & Strategic Studies; Electronic Science; Corporate Governance; Industrial Relations; and emerging paradigms in allied subjects like Accounting; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Rural Economics; Co-operation; Demography; Development Planning; Development Studies; Applied Economics; Development Economics; Business Economics; Monetary Policy; Public Policy Economics; Real Estate; Regional Economics; Political Science; Continuing Education; Labour Welfare; Philosophy; Psychology; Sociology; Tax Accounting; Advertising & Promotion Management; Management Information Systems (MIS); Business Law; Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labour Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; International Relations; Human Rights & Duties; Public Administration; Population Studies; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism & Hospitality; Transportation Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic; Web Design and emerging paradigms in allied subjects.

Anybody can submit the **soft copy** of unpublished novel; original; empirical and high quality **research work/manuscript** **anytime** in **M.S. Word format** after preparing the same as per our **GUIDELINES FOR SUBMISSION**; at our email address i.e. [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com) or online by clicking the link **online submission** as given on our website (**FOR ONLINE SUBMISSION, CLICK HERE**).

## **GUIDELINES FOR SUBMISSION OF MANUSCRIPT**

### 1. **COVERING LETTER FOR SUBMISSION:**

DATED: \_\_\_\_\_

**THE EDITOR**

IJRCM

**Subject:** SUBMISSION OF MANUSCRIPT IN THE AREA OF \_\_\_\_\_.

**(e.g. Finance/Mkt./HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)**

**DEAR SIR/MADAM**

Please find my submission of manuscript titled ' \_\_\_\_\_ ' for likely publication in one of your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published anywhere in any language fully or partly, nor it is under review for publication elsewhere.

I affirm that all the co-authors of this manuscript have seen the submitted version of the manuscript and have agreed to inclusion of their names as co-authors.

Also, if my/our manuscript is accepted, I agree to comply with the formalities as given on the website of the journal. The Journal has discretion to publish our contribution in any of its journals.

**NAME OF CORRESPONDING AUTHOR**

Designation/Post\*

Institution/College/University with full address & Pin Code

Residential address with Pin Code

Mobile Number (s) with country ISD code

Is WhatsApp or Viber active on your above noted Mobile Number (Yes/No)

Landline Number (s) with country ISD code

E-mail Address

Alternate E-mail Address

Nationality

\* i.e. Alumnus (Male Alumni), Alumna (Female Alumni), Student, Research Scholar (M. Phil), Research Scholar (Ph. D.), JRF, Research Assistant, Assistant Lecturer, Lecturer, Senior Lecturer, Junior Assistant Professor, Assistant Professor, Senior Assistant Professor, Co-ordinator, Reader, Associate Professor, Professor, Head, Vice-Principal, Dy. Director, Principal, Director, Dean, President, Vice Chancellor, Industry Designation etc. **The qualification of author is not acceptable for the purpose.**

**NOTES:**

- a) The whole manuscript has to be in **ONE MS WORD FILE** only, which will start from the covering letter, inside the manuscript. **pdf. version is liable to be rejected without any consideration.**
  - b) The sender is required to mention the following in the **SUBJECT COLUMN of the mail:**  
**New Manuscript for Review in the area of** (e.g. Finance/Marketing/HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)
  - c) There is no need to give any text in the body of the mail, except the cases where the author wishes to give any **specific message** w.r.t. to the manuscript.
  - d) The total size of the file containing the manuscript is expected to be below **1000 KB**.
  - e) Only the **Abstract will not be considered for review** and the author is required to submit the **complete manuscript** in the first instance.
  - f) **The journal gives acknowledgement w.r.t. the receipt of every email within twenty-four hours** and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of the manuscript, within two days of its submission, the corresponding author is required to demand for the same by sending a separate mail to the journal.
  - g) The author (s) name or details should not appear anywhere on the body of the manuscript, except on the covering letter and the cover page of the manuscript, in the manner as mentioned in the guidelines.
2. **MANUSCRIPT TITLE:** The title of the paper should be typed in **bold letters, centered and fully capitalised**.
  3. **AUTHOR NAME (S) & AFFILIATIONS:** Author (s) **name, designation, affiliation (s), address, mobile/landline number (s), and email/alternate email address** should be given underneath the title.
  4. **ACKNOWLEDGMENTS:** Acknowledgements can be given to reviewers, guides, funding institutions, etc., if any.
  5. **ABSTRACT:** Abstract should be in **fully italic printing**, ranging between **150 to 300 words**. The abstract must be informative and elucidating the background, aims, methods, results & conclusion in a **SINGLE PARA**. **Abbreviations must be mentioned in full**.
  6. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of **five**. These should be arranged in alphabetic order separated by commas and full stop at the end. All words of the keywords, including the first one should be in small letters, except special words e.g. name of the Countries, abbreviations etc.
  7. **JEL CODE:** Provide the appropriate Journal of Economic Literature Classification System code (s). JEL codes are available at [www.aea-web.org/econlit/jelCodes.php](http://www.aea-web.org/econlit/jelCodes.php). However, mentioning of JEL Code is not mandatory.
  8. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. **It should be free from any errors i.e. grammatical, spelling or punctuation. It must be thoroughly edited at your end.**
  9. **HEADINGS:** All the headings must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
  10. **SUB-HEADINGS:** All the sub-headings must be bold-faced, aligned left and fully capitalised.
  11. **MAIN TEXT:**

**THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE:****INTRODUCTION****REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESIS (ES)****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****LIMITATIONS****SCOPE FOR FURTHER RESEARCH****REFERENCES****APPENDIX/ANNEXURE****The manuscript should preferably be in 2000 to 5000 WORDS, But the limits can vary depending on the nature of the manuscript.**



12. **FIGURES & TABLES:** These should be simple, crystal **CLEAR, centered, separately numbered** & self-explained, and the **titles must be above the table/figure. Sources of data should be mentioned below the table/figure. It should be ensured that the tables/figures are referred to from the main text.**
13. **EQUATIONS/FORMULAE:** These should be consecutively numbered in parenthesis, left aligned with equation/formulae number placed at the right. The equation editor provided with standard versions of Microsoft Word may be utilised. If any other equation editor is utilised, author must confirm that these equations may be viewed and edited in versions of Microsoft Office that does not have the editor.
14. **ACRONYMS:** These should not be used in the abstract. The use of acronyms is elsewhere is acceptable. Acronyms should be defined on its first use in each section e.g. Reserve Bank of India (RBI). Acronyms should be redefined on first use in subsequent sections.
15. **REFERENCES:** The list of all references should be alphabetically arranged. **The author (s) should mention only the actually utilised references in the preparation of manuscript** and they may follow Harvard Style of Referencing. **Also check to ensure that everything that you are including in the reference section is duly cited in the paper.** The author (s) are supposed to follow the references as per the following:
  - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
  - Use (ed.) for one editor, and (ed.s) for multiple editors.
  - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc., in chronologically ascending order.
  - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
  - The title of books and journals should be in italic printing. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
  - For titles in a language other than English, provide an English translation in parenthesis.
  - **Headers, footers, endnotes and footnotes should not be used in the document.** However, **you can mention short notes to elucidate some specific point**, which may be placed in number orders before the references.

**PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**

**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

**CONTRIBUTIONS TO BOOKS**

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19-23

**UNPUBLISHED DISSERTATIONS**

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

**ONLINE RESOURCES**

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

**WEBSITES**

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>



## STRATEGIC ANALYSIS ON BIG DATA IN INDIAN TECHNOLOGICAL SCENARIO

**Dr. VAIBHAV SHARMA****ASST. PROFESSOR****S. S. JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE  
JAIPUR****SANGEETA VAIBHAV MEENA****ASST. PROFESSOR****S. S. JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE  
JAIPUR****VANDANA NIGAM****ASST. PROFESSOR****S. S. JAIN SUBODH P.G. (AUTONOMOUS) COLLEGE  
JAIPUR****ABSTRACT**

*The present time is the data time in global technological scenario where extensive volume of information in zettabytes is rising each day. Big Data is a system to deal with the voluminous unstructured, semi organized and organized information in more productive and orderly way. Big Data is an advanced pattern in Indian technological sector which manages titanic information. As Big Data is excessively colossal for a single individual, making it impossible to analyse, fitting headways are being used. Big Data Analytics has been expanding much point of convergence of thought as of late as experts from industry and the academic world are attempting to effectively think and use all possible data from the amazing measure of data made and got. Ordinary techniques for taking care of enormous information isn't suitable in on going time as this information incorporates content, sound, video, illustrations and numerous more structures. Dealing with the wide variety of data that comes in enormous volume in a short time period, asking for an adjustment in part of time, planning and examination of immense information shortly of time is the most difficult undertaking identified with tremendous information put away in ordinary databases. Big Data is the best decision of Indian industrialists and Indian IT enterprises as it can deal with the enormous information wisely and capable way. This paper shows a brief outline of research progress in Indian technological scenario identified with Big Data Processing and Analytics and complete up with a discussion on inspect headings in a comparative locale.*

**KEYWORDS**

big data, analytics, big data analytics, big data processing.

**JEL CODE**

C55

**1. INTRODUCTION**

In today scenario, Big Data and Information is growing globally. Indeed, the measure of advanced information that exists is developing at a quick rate, multiplying like clockwork, and changing the way we live. As indicated by IBM, 13.6 billion gigabytes (GB) of information was produced each day in 2017. An article by Forbes states that Data is becoming speedier than any time in recent memory and continuously 2020; around 4.3 megabytes of new data will be made each second for each individual on the planet. This makes it critical to at any rate know the nuts and bolts of the field. All things considered, here is the place our future falsehoods. In this article, we will separate between the Data Science, Big Data, and Data Analytics, in view of what it is, the place it is utilized, the abilities you have to end up an expert in the field, and the pay prospects in each field.

**2. OBJECTIVES OF THE STUDY**

The objective to conduct Research study is to find solution of Big Data handling problems and to develop new solutions and tools. The destinations to direct Research think about are to discover technical arrangements of Big Data.

- (i). Implementations of Big Data new technologies in Indian Technological Scenario.
- (ii). Promote Data-driven basic leadership and promoting arrangements, join Big Data into Business Intelligence (BI), prescient investigation devices and showcasing procedures.
- (iii). Promote to discover latest tools in maintaining of Big Data volume, variety, and speed.

**3. RESEARCH METHODOLOGY OF BIG DATA ANALYTICS**

This paper is based on the research based on rapidly developing Big Data Analytics in Indian Technological Scenario. Research factors included Big Market Exploitation Analysis to discover future prospects Analytics. This Research paper is based on Micro Level study conduct on Indian 32 Big Data Analytics Report which turns to accurate Analysis. In this review a question is posed.

Question: What is the role of Big Data in Various Level of business in rapidly growing Indian Technological Scenario?

The required data is extracted from the papers to answer the question posed above.

**4. EXPLOITING FUTURE POSITION OF BIG DATA MARKET IN INDIA**

In present technological scenario Big Data is growing rapidly all over world. Colossal data is uncovered by its usage in various Indian corporate organizations with interpretations as indicated by accommodation understanding. Widely it can be portrayed as a system fit for dealing with huge size of data in various plans – volume, grouping and speed. Enormous data facilitates propelled capacities to stay business improvement and gives portrayal abilities to measure complex data plans for business. Completing tremendous data transversely finished undertakings has rendered redesigns when all is said in done prosperity, progression in back, telecom, and FMCG. It has also lightened pressure and feeling examination on correspondence channels.

As demonstrated by a joint report by NASSCOM and market information firm Blueocean, examination promote in India has been regarded right now at \$1.2 Bn and is depended upon to reach \$2.3 Bn by 2017-18. Regardless, since the market is creating at 26% CAGR, it is required to reach \$16 Bn by 2025 which is around

an eight-cover bounce. India's bit of the general business is depended upon to be 32% looking multipronged approach of mastery change, thought organization, things, and stage to comprehend the vision.

This industry uses 90,000 people starting at now in divisions, for instance, BFSI, retail, telecom and human administrations and the improvement is incited by enthusiasm for cloud-based game plans and perceptive examination capacities. There are around 600 associations in this space out of which 400 are new organizations and approx. 100 of these were incorporated 2015 itself.

Watching out for the three sections of volume, variety, and speed – advanced gigantic data stages can improve the best line through extraordinary personalisation at scale, upgrade all that truly matters through amazing capability at scale and besides upgrade organization through exceptional seeing at scale. Use of gigantic data advancement is defying new troubles like storing, tangibility, security, and expansion. Meanwhile, it is making another perspective as data is being made by various sorts of sensors, PDAs, social goals and even satellites. The accompanying time of advancement is discernible because of snappy progress in the related field of automated thinking and significant learning counts that require complex human-like thinking and fundamental initiative aptitudes. Immense data examination, which by then joins into fields like artificial intelligence and machine learning has huge possible results.

## 5. GLANCE OF BIG DATA ANALYSIS

The idea of huge information has been around for quite a long time; most of the associations now understand that they grasp every bit of the information that streams into their organizations, and can get huge incentive by applying analytics on it. Even in the early decade's people expressed the enormous information expression, organizations were utilizing fundamental examination basically numbers in a spread sheet that were physically analysed to find bits of knowledge and patterns. The speed and effectiveness are the advantages that are conveyed by enormous data analytics. While a couple of years back a business would have accumulated data, analysis it and uncovered data that could be utilized for future uses, today businesses required it for future as well as for prompt decisions. The ability to work speedier and remain smart gives organisations a competitive edge they didn't have previously.

- YARN: a bunch administration innovation and one of the key highlights in second-age Hadoop.
- MapReduce: a product structure that enables designers to compose programs that procedure monstrous measures of unstructured information in parallel over an appropriated group of processors or remain solitary PCs.
- Spark: an open-source parallel handling structure that empowers clients to run vast scale information investigation applications crosswise over bunched frameworks.
- HBase: a section situated key/esteem information store worked to keep running over the Hadoop Distributed File System (HDFS).
- Hive: an open-source information distribution center framework for questioning and breaking down extensive datasets put away in Hadoop records.
- Kafka: a disseminated distribute buy in informing framework intended to supplant conventional message agents.
- Pig: an open-source innovation that offers an abnormal state system for the parallel programming of MapReduce employments to be executed on Hadoop groups.

## 6. NECESSITY OF BIG DATA ANALYSIS IN INDIAN BUSINESS SCENARIO

Enormous information examination enables associations to bridle their information and utilize it to distinguish new openings. That, thusly, prompts more astute business moves, more productive tasks, higher benefits and more joyful clients. In the report Big Data in Big Companies, IIA Director of Research Thomas H. Davenport talked about his study related to big data activities of more than 20 well established firms and how they utilized their enormous information. He discovered they got an incentive in the accompanying ways:

- Cost decrease-** Due to the need of storing large amount of data, enormous information technologies, for example, Hadoop and cloud-based analysis brings significant cost focal points; and provide efficient methods for running businesses.
- Know your customer better-** Businesses provide their clients what they need by checking client needs and fulfilment through analysis. Davenport calls attention to that with huge information examination, more organizations are making new items to address clients' issues.
- Better and faster predictions-** Organizations can make fast and better predictions based on what they have understood by break down data quickly. This is possible with Hadoop and in-memory analytics, joined with the capacity to dissect new sources of information.
- Availability of data in real time-** With the power of real time streaming platforms like Apache Storm, Apache Kafka, IBM Infosphere streams and other big data tools; relevant data can be available in real time in accurate and structured form. Fraud Detection, E-commerce, Social Networks, Healthcare etc. are some areas that are using real time big data processing. Big data is capable to handle diversified data at faster rate which is not possible with conformist methods.

## 7. CURRENT PATTERNS OF BIG DATA ANALYTICS

The present worldwide populace surpasses 11.7 billion, and more than 10 billion of these individuals are associated with the Internet. Moreover, 12 billion people are utilizing different cell phones, as per McKinsey (2017). Because of this innovative transformation, large numbers of individuals are producing gigantic measures of information through the expanded utilization of such gadgets. Specifically, remote sensors ceaselessly create much heterogeneous information that is either organized or unstructured. This Big Data is portrayed by three angles:

- The information is numerous.
- The information can't be arranged into normal databases.
- Data are produced, caught, and handled rapidly.

Big Data is promising for business application and is quickly expanding as a fragment of the IT business. It has produced huge enthusiasm for different fields, including the make of medicinal services machines, managing an account exchanges, online networking, and satellite imaging. Current information volumes are driven by both unstructured and semi structured information. Consequently, end-to-end preparing can be hindered by the interpretation between organized information in social frameworks of database administration and unstructured information for examination. Stunning development rate of the measure of gathered information creates various basic issues and difficulties portrayed by, for example, fast information development, exchange speed, assorted information, and security issues. In any case, the developments in information storing and mining advances empower the protection of these expanded measures of information. In this conservation procedure, the nature of the information produced by associations is changed. In any case, Big Data is still in its early stages organized and has not been audited as a rule. Big Data is a basic issue that requires genuine consideration. So far, the fundamental scenes of Big Data have not been bound together. Besides, Big Data can't be prepared utilizing existing advances and techniques. Hence, the age of boundless information by the fields of science, business, and society is a worldwide issue. As for information examination, for example, techniques and standard apparatuses have not been intended to seek and break down huge datasets. Subsequently, associations experience early difficulties in making, overseeing, and controlling extensive datasets. Frameworks of information replication have likewise shown some security shortcomings as for the age of numerous duplicates, information administration, and arrangement. These approaches characterize the information that are put away, broke down, and got to. They additionally decide the pertinence of this information. To process unstructured information sources in Big Data ventures, concerns with respect to the versatility, low inactivity, and execution of information foundations and their server farms must be tended to. In the IT business all in all, the fast ascent of Big Data has produced new issues and difficulties as for information administration and examination. Five normal issues are volume, assortment, speed, esteem, and intricacy. Each issue requires specialized research to deal with.

## 8. STRATEGIC ANALYSIS OF BIG DATA AT INTERNATIONAL MARKET

Data increments quickly at a rate at regular intervals. From 1986 to 2017, the worldwide capacities with regards to innovative information stockpiling, calculation, handling, and correspondence are increasing so rapidly that computer is an integrated and essential tool for every field. Increased use of PC also boosts the bytes of data produced at a fiery rate.

In 2017, 18.5 quintillion bytes of information were produced day by day, and 94% of current information overall began in the previous four years (Big Data, 2013). 7.4 million TB of new information is created every day. In 2017, the market for Big Data was \$32.6 billion, and this esteem is required to increment to \$38.7 billion out of 2017. Starting at July 17, 2017, the measure of computerized information on the planet was 17.7ZB; Facebook alone stores, gets to, and examines 48+PB of client created data. In 2018, Google was handling 38,234TB of information day by day. To improve promoting, Akamai forms and investigates 75 million occasions for each day. Walmart forms more than 8 million client exchanges, along these lines producing information more than 5.3 PB as a gauge. In excess of 8 billion individuals overall call, content, tweet, and peruse on cell phones. The measure of email accounts made worldwide is relied upon to increment from 6.6 billion of every 2017 to more than 8.6 billion by late 2017 at a normal yearly rate of 11% throughout the following four years. In 2017, a sum of 112 billion messages were sent and got day by day, and this esteem is relied upon to increment at a normal yearly rate of 27% throughout the following four years to surpass 154 billion before the finish of 2016. In 2017, 1120 million clients (51% of all email clients) were messaging through cell phones. Boston.com announced that in 2017, roughly 765 billion messages were sent day by day. Right now, an email is sent each  $6.2 \times 10^{-9}$  seconds. Consequently, the volume of information increments every second because of fast information age.

From 2010 to 2017 the growth of big data was increased at steady rate but from 2015 onwards the growth of big data shoots very rapidly and expected to cross 80-81 zettabytes in year 2021. In real time data, information is distributed immediately after assortment, so this data is to be stored and kept without delay as timeliness is the prime need of real time data. It is expected that real time data will grow approx. 3.25 times the rate of overall data formation this is again a part of big data which must be handled very efficiently.

## 9. MANAGEMENT OF BIG DATA ANALYST IN INDIAN BUSINESS MARKET PROSPECTS

The engineering of Big Data must be synchronized with the help framework of the association. To date, the greater part of the information utilized by associations are stale. Information is progressively sourced from different fields that are confused and untidy, for example, data from machines or sensors and vast wellsprings of open and private information. Beforehand, most organizations were not able either catch or store these information, and accessible devices couldn't deal with the information in a sensible measure of time. In any case, the new Big Data innovation enhances execution, encourages development in the items and administrations of plans of action, and gives basic leadership bolster. Huge Data innovation expects to limit equipment and handling costs and to confirm the estimation of Big Data previously submitting huge organization assets. Legitimately oversaw Big Data are open, solid, secure, and reasonable. Thus, Big Data applications can be connected in different complex logical orders (either single or interdisciplinary), including air science, stargazing, medication, science, genomics, and biogeochemistry. In the accompanying segment, we quickly examine information administration devices and propose another information life cycle that uses the innovations and phrasings of Big Data. Administration Tools with the advancement of registering innovation, massive volumes can be overseen without requiring supercomputers and high cost. Numerous devices and strategies are accessible for information administration, including Google Big Table, Simple DB, Not Only SQL (NoSQL), Data Stream Management System (DSMS), MemcacheDB, and Voldemort. Not with standing, organizations must create exceptional instruments and innovations that can store, get to, and break down a lot of information in close continuous in light of the fact that Big Data contrasts from the customary information and can't be put away in a solitary machine. Moreover, Big Data does not have the structure of customary information. For Big Data, probably the most regularly utilized devices and strategies are Hadoop, MapReduce, and Big Table. These advancements have re-imagined information administration since they successfully process a lot of information productively, cost-viably, and in an auspicious way. The accompanying segment portrays Hadoop and MapReduce in additionally detail, and the different activities/systems that are identified with and appropriate for the administration and investigation of Big Data.

## 10. ANALYSIS OF EMERGING TECHNOLOGICAL TRENDS IN BIG DATA ANALYTICS

Over the last few years Big Data technologies have been receiving lot of attention. Several trends and innovations are rapidly happening in this area.

### a) Hadoop and Big Data

According to Forrester forecast report on big data tech market Hadoop usage is increasing 32.9% per year. Hadoop, Spark and other open source applications are dominating the big data market, and this inclination is likely to continue in coming years. Hadoop for the Enterprise a TDWI Best Practices Report by Philip Russom states that nearly 60 percent of enterprises expect to have Hadoop clusters running in production by the end of 2018.

### b) Big Data Streaming Analytics

Organization adopting big data approach to attain true streaming analytics. This is the ability to process and analyse data sets during its creation time. Big data streaming is ideally a speed-focused approach in which data is quickly processed in order to extract real-time insights from it. For real-time analytics, many open source frameworks and tools are now available. The Spark Streaming, Kafka, and Cassandra have emerged as a great combination for construction event-driven, scalable, asynchronous, and fault tolerant applications.

### c) Visualization Models in Big Data Analytics

Big Data visualization represents data of nearly any type in a graphical layout like heat maps and fever charts, which allows decision makers to discover data groups to find correlations or unexpected patterns. Visualization models becomes the foremost selection for handling big data sets as human's brains have better capability to process visual patterns efficiently. With these big data analytics reveals deeper business understandings. Jupyter, Tableau, Google chart and D3.js are some popular Big Data Visualization tools.

### d) Machine Learning Automation

According to Gartner, Inc. machine learning is one of the top 10 strategic technology trends for 2017. As Big Data Analytics competencies have advanced, some enterprises have started capitalizing in machine learning. Machine learning technology assists businesses in fraud detection, real-time ads, voice recognition, pattern recognition, etc. Advanced Machine learning algorithms helps enterprises to generate systems that learn, understand, adapt, and possibly operate autonomously; and make more appropriate forecasts.

### e) Predictive Analytics

Earlier in big data analytics, organizations were beholding back at their data to understand what happened and after that they used their analytics tools to examine causes of those things. Predictive analytics thinks a step ahead; it is used to make predictions about what might happen in the future. Several vendors have come out with predictive analytics tools and that number could rise in the coming years as businesses become more aware of this powerful tool. EverString, SAS Predictive Analytics, IBM SPSS, BOARD are some of the Predictive Analytics tools.

### f) Security Intelligence with Big Data

Due to the tremendous usage of big data analytics many organisations incorporate it into their security strategy. Big Data analytics engaged in investigating log files, financial transactions and network traffic in order to find abnormalities and suspicious activities, and also compare numerous sources of information to provide a logical view. Organizations security log statistics offers lots of information related to previous cyber-attacks attempts which can be used to predict, prevent and alleviate forthcoming attempts.

### g) Meeting Dark Data Challenge

In the framework of business data, the term dark designates that data which is hidden and not yet put to work. It can be stored in the traditional form of paper files, historical records, or any other non-digital data recording formats; also in the form of audio, video, image files; the torrent of machine and sensor information generated by the Internet of Things. Organizations are developing big data models that will let them to transfer data easily into Hadoop from environments which are usually very dark.

## CONCLUSION

We have technocrat with of Big Data. Through technological advancement better big data analysis can be develop and new dimensions can be measured. Numerous specialized techniques depicted in this paper must be tended to before this potential can be acknowledged completely. From this review, it is comprehended that each enormous information stage has its individual core interest. Some of them are intended for group preparing while some are great at on going expository.

Each enormous information stage additionally has particular usefulness. Diverse systems utilized for the investigation incorporate factual examination, machine learning, information mining, insightful examination, distributed computing, quantum figuring, and information stream handling. We believe that in future specialists will give careful consideration to these systems to tackle issues of enormous information successfully and productively

## REFERENCES

1. Anjali Soni, Sangeeta Vaibhav Meena "Query Optimization- Challenges and Factors Affecting the Overall Cost in Distributed Databases", International Journal of Mechanical Engineering and Information Technology, Volume 04 Issue 02.
2. Chen, H., Chiang, R. and Storey, V. (2012), "Business intelligence and analytics: from big data to big impact", *MIS Quarterly*, Vol. 36 No. 4, pp. 1165-1188.
3. Dr. Vaibhav Sharma, (I.S.B.N 978-81-925882-5-4/570-574) "Systematic Analysis of Latest Technologies utilized in Cyber Security in Changing Global Scenario" in "International Conference on Advance Trends in Engineering and Technology(ICATET-December,2013)".
4. Dr. Vaibhav Sharma, "Future track of Strategic Growth of M-Commerce Market in Global Scenario"" in (ISSN 2231 – 5756/55-57) "INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER, I.T. & MANAGEMENT" Volume No. 7. (2017), Issue No.09 (September).
5. Han Hu, Yonggang Wen, Tat-Seng Chua, and Xuelong Li, Toward Scalable Systems for Big Data Analytics: A Technology Tutorial.
6. Hugh J. Watson, Department of MIS, University of Georgia. Big Data Analytics: Concepts, Technologies, and Applications.
7. N. Alamelu Menaka, Dr. Jabasheela, Survey on Big Data Processing using Hadoop, Map Reduce.
8. Nawsher Khan, Ibrar Yaqoob, Ibrahi Abaker Targio Hashem,1Zakira Inayat, Waleed Kamaleldin Mahmoud Ali, Muhammad Alam, Muhammad Shiraz, and Abdullah Gani1, Big Data: Survey, Technologies, Opportunities, and Challenges.
9. Thomas H. Davenport and Jill Dyché, Big Data in Big Companies: Executive Summary.
10. Vandana Nigam, Shalu J Rajawat "Benefits and Issues of Cloud Technology in Present Scenario" in Ascent International Journal for Research Analysis Vol-3 Issue 7 April-June 2018, Page no 49.1 to 49.9 ISSN No 2455-5967
11. Vandana Nigam, Shalu J Rajawat "Search Engine: An Overture" in Subodh Journal of Recent Trends in Information Technology in vol 07/Issue 01, November 2017, Page no 29-32, ISSN No 0975-9875
12. Xiaolong Jin, Benjamin W. Wah, XueqiCheng, YuanzhuoWang, Significance and Challenges of Big Data Research.
13. (I.S.B.N-978-81-89107-92-5) "Virtual Robots: An Ultramodern Dimension of Artificial Intelligence Research" in National Conference on RECENT TRENDS IN INFORMATION TECHNOLOGY: OPPORTUNITIES AND CHALLENGES", March, 2010.

## **REQUEST FOR FEEDBACK**

**Dear Readers**

At the very outset, International Journal of Research in Computer Application & Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue, as well as on the journal as a whole, on our e-mail **infoijrcm@gmail.com** for further improvements in the interest of research.

If you have any queries, please feel free to contact us on our e-mail [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com).

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward to an appropriate consideration.

With sincere regards

Thanking you profoundly

**Academically yours**

Sd/-

**Co-ordinator**

## **DISCLAIMER**

The information and opinions presented in the Journal reflect the views of the authors and not of the Journal or its Editorial Board or the Publishers/Editors. Publication does not constitute endorsement by the journal. Neither the Journal nor its publishers/Editors/Editorial Board nor anyone else involved in creating, producing or delivering the journal or the materials contained therein, assumes any liability or responsibility for the accuracy, completeness, or usefulness of any information provided in the journal, nor shall they be liable for any direct, indirect, incidental, special, consequential or punitive damages arising out of the use of information/material contained in the journal. The journal, neither its publishers/Editors/ Editorial Board, nor any other party involved in the preparation of material contained in the journal represents or warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such material. Readers are encouraged to confirm the information contained herein with other sources. The responsibility of the contents and the opinions expressed in this journal are exclusively of the author (s) concerned.



## ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

### *Our Other Journals*

