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on

"Recent Trends in Mathematics & its Applications- 2024"

(ICRTMA'24)

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Chief Editors

Dr. S. Malathi
Dr. S. Kanagasundari

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Dr. M. Munafur Hussaina, M.Sc, M.Phil, Ph.D.
Vice Principal & Head of Computer Science
Mrs. B. Fahamedatha Baseem, MCA, M.Phil, D.Tech.
Vice Principal & Head of Computer Application
AIMAN College of Arts and Science for Women

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GENERAL SECRETARY & CORRESPONDENT

Message

I am delighted in acknowledging the International Conference ICRTMA'24 ogrganized by the Department of mathematics on “Recent Trends in mathematics and it's Application”. I appreciate the organizing committee for showing a keen interest in organizing a Successful Conference and contributing new ideas and research findings. I wish them for their endeavors to spread knowledge.

With warm regards,
(Janab. M.Y.Habibullah)
General Secretary & Correspondent
AIIMAN College of Arts and Science for Women
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Principal

Message

As a dedicated educator with years of experience, I passionately acknowledge the transformative role that a reputable educational institution plays in shaping contemporary society. Leading AIMAN College, I find immense pride in guiding a center of learning entrusted with the profoundresponsibility of cultivating the most invaluable asset of any nation – the minds of young women, uniquely poised to contribute significantly to our shared future.

Formation of AIMAN Education and Welfare Society and the consequent establishment of AIMAN College of Arts and Science for Women at Tiruchirappalli in the year 2000 marks the culmination of over two decades selfless service by the society members of AIMAN. The objects of the society in promotion of higher education among the young women in general, who are identified as economically and educationally most backward.

The purpose of organizing International Conference in Mathematics is to understand the global perspectives of mathematicians with the cutting edge technologies. Srinivasa Ramanujan (1887-1920), the man who reshaped twentieth-century mathematics with his various contributions in several mathematical domains, including *mathematical analysis, infinite series, continued fractions, number theory,* and *game theory* is recognized as one of history's greatest mathematicians. Surprisingly, he never received any formal mathematics training. Most of his mathematical discoveries were based only on intuition and were ultimately proven correct. Srinivasa Ramanujan began developing his theories in mathematics and published his first paper in 1911. He was mentored at Cambridge by GH Hardy, a well-known British mathematician who encouraged him to publish his findings in a number of papers. In 1918, Ramanujan became the second Indian to be included as a Fellow of the Royal Society.

The focus of this International Conference on Recent Trends in Mathematics & its Applications (ICRTMA' 24) organized by the Department of Mathematics is to promote budding researchers in the field of mathematics and recent advancements in data analysis with their sincere contributions as papers with global focus. This book consists of the research papers not only in pure and allied mathematics but also other thrust areas like statistics, data analysis, image analysis etc.

I wish for the success of International Conference and congratulate all the editors and faculties as well as authors who contribute their efforts and dedication towards releasing the Conference Proceedings with ISBN number.

B. Vani

PRINCIPAL
Dr. B. Vani

Editor – in – Chief's Note

Today's Companies recognize innovations as a positive practice in their business operations. New technologies, evolving customer expectations and the globalized market place catalyze the need for companies to adapt quickly, identify new opportunities to capitalize on them faster than ever. The reality is that majority of companies are struggling to master all the dimensions of transcending requirements of the Corporate World. In this context, the present conference proceedings talk about the challenges and methods of facing the changing scenario of corporate sector.

We extend our sincere thanks to our Chairman, Managing Trustee and Principal for their constant support and encouragement. I congratulate all the participants for their enthusiastic participation and I extend my thanks for the support in conference.

With warm regards,
Dr. S.Malathi
Head & Assistant Professor
Department of Mathematics
AIIMAN College of Arts and Science for Women
Tiruchirappalli

Authors

Mrs. S. Aasha Research Scholar, PG Department of Computer Science, Bharathidasan University aashalearner@gmail.com	**Mrs. M. Affrose Begum,** Assistant professor, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Affiliated to Bharathidasan University, Tiruchirappalli – 620024, Tamil Nadu, India.
J. Afrin PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli, Tamil Nadu, India. – 620020	**M.S. Afya Farhana** Assistant Professor, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), afyafarhana@gmail.com
C. Alexander Assistant Professor, P.G and Research Department of Mathematics, Raja Doraisingam Government Arts College, Sivagangai-630561 Email: alexvel chinna@gmail.com	**S. Anbu Nisha Jeba Soundar** Research Scholar (Full Time) Alagappa University College of Physical Education, Alagappa University, Karaikudi
H R Anesha Department of Mathematics, St. Mary's College (Autonomous), Thoothukudi – 628001, Abishekapatti, Tirunelveli – 627012, Tamil Nadu, India. aneshahr@gmail.com	**V. Anuf Sarumathi** Research Scholar[1], Department of Mathematics St. Mary's College(Autonomous) Thoothukudianufsarumathi96@gmail.com
S. Anusuya Baggiyalakshmi Research Scholar PG and Research Dept. of Mathematics Thanthai Periyar Government Arts and Science College (Autonomous)* Tiruchirappalli, India anusuya1997bhc@gmail.com	**Anusa S** Department of mathematics, Amrita college of Engineering and Technology, Nagercoil. 629901 Email: s_anusa@amrita.edu.in
Aparna Vyas Manav Rachna University, Mathematics Faculty, Department of Sciences (Mathematics) aparna.vyaas@gmail.com	**R. H Aravinth** Department of Mathematics, Chettinadu Public School (CBSE), Karaikudi – 630307, Corresponding author – aravinthrh@gmail.com & helenranjan@gmail.com
S. Arulraj Department of Mathematics St.Xavier's College, Palayamkottai-627002	**Arun** Department of Mathematics, Bahra University, Waknaghat, Distt. Solan, Himachal Pradesh, India BU2022PGMAT02@bahrauniversity.edu.in
M. Ayisha Rukshana I MSc(CS), PG Department of Computer Science, AIMAN College of Arts and Science for Women, Trichy-21.	S. **Aysha Begum** PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy aysha20athiya@gmail.com
O P Baby Shafina PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy - 620020,Tamil Nadu, India, hanoonamal89@gmail.com.	**K. Bala Deepa Arasi** Assistant Professor, PG and Research Department of Mathematics, A.P.C. Mahalaxmi College for Women, Thoothukudi.

M. Bhuvaneshwari Department of Mathematics, Assistant Professor, SRM TRP Engineering College, Tiruchirapalli, Tamil Nadu, India. bhuvaneshwari.m@trp.srmtrichy.edu.in	**R. Christina Mary** Department of Mathematics St. Xavier's College, Palayamkottai-627002
Mrs. N. Deepika Assistant Professor, Department of Computer Applications AIMAN College of Arts and Science for Women Trichy **deepika.bca17@gmail.com**	**M. Dhanapal** Assistant Professor, Department of Mathematics, Kongunadu College of Engineering and Technology (Autonomous), Tiruchirappalli-621215, Tamilnadu, India. mdhanapal46@gmail.com
C. Dhivya Research Scholar, PG & Research Department of Mathematics, A.P.C Mahalaxmi College, Thoothukudi.	**Dinesh Thakur** Department of Mathematics, Bahra University, Waknaghat, Distt. Solan, Himachal Pradesh, India dinesht693@gmail.com
P. Edwin Thomas Assistant Professor, National College, Trichy	**M. Elakkiya** Department of Mathematics, Assistant Professor, SRM TRP Engineering College, Tiruchirapalli, Tamil Nadu, India. E-mail: elakkiya.m@trp.srmtrichy.edu.in
Mrs.B.Fahamedatha Baseem Head & Assistant Prof., Department of Computer Applications AIMAN College of Arts & Science for Women Tiruchirappalli, India, mfahameda@gmail.com	**N. Fajila Begam**, II – M.Sc., Mathematics, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli, fajilabegam27042002@gmail.com
S. Farhana Jahan, M.Sc., Mathematics, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), farhanajahan2805@gmail.com	**S.H.Farzin** Department of mathematics AIMAN College of Arts & Science for Women, Trichy, Tamilnadu, India
Mrs.B.Farhan Assistant Professor Department of English, AIMAN College of Arts & Science for Women, Trichy, Tamilnadu, India E – Mail: farhaneducate@gmail.com	**A. Fayizah** MCom, PG Department of Commerce, AIMAN College of Arts and Science for Women, Trichy-21.
S. R. Gayathri Research scholar, PG and Research department of Mathematics, Thanthai Periyar Government Arts and Science College , Trichy-23. Email: srgayathrimaths@gmail.com	**Geetika** Manav Rachna University, Master's Student, Department of Sciences (Mathematics) geetikawadhwa99@gmail.com
N. Giftlin Kiruba PG and Research Department of Mathematics, St. Xavier's College (Autonomous), Palayamkottai - 627 002, Tamil Nadu. giftlinkiruba@gmail.com	**P. Gomathy** Physical Education Teacher, Kristu Jayanti College, Autonomous, Bengaluru, Karnataka
N. Gowri Monicka P.G. and Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli - 620020, India gowrimonicka05@gmail.com	**Gowri Shankari A** Assistant Professor, Cauvery College for Women (Autonomous), Trichy – 18, India E-mail: gowrirajinikanth@gmail.com,
S.Hajara Siddega Department of mathematics AIMAN College of Arts & Science for Women, Trichy, Tamilnadu, India	**S. Harini** **PG Student** PG and Research Department of Mathematics Cauvery College for Women (Autonomous), Trichy-18.
K. Hemapriya M.Sc., Mathematics, PG and Research Department of	**A. Hemalatha** Post Graduate student

Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli, hemaatsomewhere@gmail.com	P.G & Research Department of mathematics, Jamal Mohamed college (Autonomous), Tiruchirappalli, **hemaaranganathan99@gmail.com**
Dr. R. Helen PG & Research Department of Mathematics, Poompuhar College (Autonomous) Melaiyur – 609107.	**A. Jannathul Firdows** Assistant Professor, Department of English, AIMAN College of Arts and Science for Women, Tiruchirappalli, Tamilnadu.
M. Jasmin Uhanitha Assistant Professor and Head PG Department of Food Service Management and Dietetics AIMAN College of Arts and Science for Women Trichy, Tamil Nadu	**A. Jasmine Kingsly** Research Scholar, Thanthai Periyar Government Arts and Science College (Autonomous), Trichy-23. Email: jasminekingsly@gmail.com
Dr. G. Janaki Associate Professor, PG and Research Department of Mathematics, Cauvery College for Women(Autonomous), Tiruchirappalli, Tamil Nadu, India. janakikarun@rediffmail.com	**Dr. P. Jayagowri** *Principal* *PG & Research Department of Mathematics* Sudharsan College of Arts & Science, Perumanadu, Pudukottai.
I. Jency Soumia. II M.Sc., Reg. No. 20222012515106, PG & Research Department of Mathematics, A.P.C Mahalaxmi College, Thoothukudi.	**D. Jenisha Femi Cellus,** M. Sc, Mathematics, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli – 620024, Tamil Nadu, India.
Ms. S. Jeya Sharmila Ph. D Research Scholar, Alagappa University College of Physical Education, Alagappa University, Karaikudi, Tamilnadu. E-mail-s.jeyasharmila@gmail.com	**D. Joslin Amala** Research Scholar, (Register No.22212212092001), Department of Mathematics, St. Mary's College (Autonomous), Thoothukudi-628001, Tamil Nadu, India, Email: , joslinamala123@gmail.com
A. Jothika M.Sc., Mathematics, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli. jothikaarumugam333@gmail.com	**A. Juwahar Nisha** Assistant Professor, Department of English AIMAN College of Arts and Science for Women, Tirchy-21
G. Kaleeswari Assistant Professor PG Department of Food Service Management and Dietetics AIMAN College of Arts and Science for Women Trichy, Tamil Nadu	**Dr. S. Kanagasundari** Librarian AIMAN College of Arts and Science for Women K. Sathanur, Trichy-620 021.
N. Karpagajothi Ph. D Research Scholar Alagappa University College of Physical Education, Karaikudi, Tamil Nadu	**K. Karthika** M.Sc., Mathematics, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy, karthikakarnan2001@gmail.com
Dr K S Kanzul Fathima PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy - 620020,Tamil Nadu, India, kanzulfathima@gmail.com	**Kavitha S** Department of mathematics, Amrita college of Engineering and Technology,Nagercoil. 629901 Email: s_kavitha@amrita.edu.in
Ms. J. Kiruthika *Research scholar,* *PG & Research Department of Mathematics* Sudharsan College of Arts & Science, Perumanadu, Pudukottai.	**F. Ladiska Mary** I MSc(CS), PG Department of Computer Science, AIMAN College of Arts and Science for Women, Trichy-21
J. Latha Christiyana P.G. and Research Department of Mathematics,	**R. Laksaya** Agricultural Engineering College and Research

Jamal Mohamed College, Tiruchirappalli - 620020, India	Institute, Kumulur-621712 Email : cpriyankac1984@gmail.com
Dr.T. Lakshmi Assistant Professor Department of Mathematics Thiagarajar College of Engineering Madurai-625015. tlakshmimdu@tce.edu	**R. Maheswari** Department of Mathematics, Shrimati Indira Gandhi College, Tiruchirappalli (Affiliated to Bharathidasan University), Tamil Nadu, India - 620 002. mahimathematics@gmail.com
Dr. S. Malathi Head & Assistant Professor of Mathematics, AIMAN College of Arts and Science for Women, Trichy-21.	**Dr. M. Maragatham** Associate Professor of Mathematics PG and Research Dept. of Mathematics Thanthai Periyar Government Arts and Science College (Autonomous)* Tiruchirappalli maraguevr@yahoo.co.in
Dr. M. Munafur Hussaina VP & Head, Department of Computer Science, AIMAN College of Arts and Science for Women, Trichy-21.	**Dr. K. Murali Rajan** Principal i/c Alagappa University College of Physical Education, Karaikudi, Tamil Nadu
Dr. P. Muruganantham Assistant Professor, P.G and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli.	**Dr. K.L. Muruganantha Prasad** Assistant Professor, H.H. The Rajah's College, Pudukkottai.
Dr. A. Nagoor Gani Associate Professor, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous) Tiruchirappalli.	**S. Nithya** Assistant Professor, St. Xavier's College (Autonomous), Palayamkottai-627002, Tamil Nadu, India. nithyasxc@gmail.com
M. Nivetha Agricultural Engineering College and Research Institute, Kumulur-621712 Email : mnivetha164@gmail.com, arulmozhi482@gmail.com	**M. S. Noorul Risana** I MSc(CS), PG Department of Computer Science, AIMAN College of Arts and Science for Women, Trichy-21.
A. Pappa, Research scholar, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-620020, India Assistant Professor, AIMAN College of Arts and Science for Women, Trichy-21.	**Partha Agasti** Assistant Professor of Mathematics, SBSS Mahavidyalaya, Goaltore, Paschim Medinipur, Pin-721128, India Email: parthaagasti15@gmail.com
S. Pasunkili Pandian Department of Mathematics Adithanar Arts and Science college, Tiruchendur-628216.	**V Prabhavathi** PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Affiliated to Bharathidasan University, Tiruchirappalli-620024, Tamil Nadu, India
Prakash Chand Thakur Department of Mathematics, Bahra University, Waknaghat, Distt. Solan, Himachal Pradesh, India dr.pcthakur73@gmail.com	**K. Priyadharshini,** M.Sc. Mathematics., PG & Research Department of Mathematics Jamal Mohamed College (Autonomous), Tiruchirappalli, priyaatsomewhere@gmail.com.
G. Praveena I MSc(CS), PG Department of Computer Science, AIMAN College of Arts and Science for Women, Trichy-21.	**V. Preethi,** Ph.D. Scholar (Full-Time), Alagappa University College of Physical Education, Alagappa University, Karaikudi. preethivenkatesh2894@gmail.com
V. Prisci St. Xavier's college (Autonomous), Palayamkottai-627002. priscivictor97@gmail.com	**Priyanka.C** Agricultural Engineering College and Research Institute, Kumulur-621712 cpriyankac1984@gmail.com

Dr. T. Priya AIMAN College of Arts and Science for Women K. Sathanur, Trichy-620 021.	**Dr. A. Punitha Tharani** Associate Professor, Department of Mathematics, St. Mary's College (Autonomous), Thoothukudi- 628001, Tamil Nadu, India, punitha_tharani@yahoo.co.in
Dr. D. Radha Assistant Professor, PG & Research Department of Mathematics, A.P.C Mahalaxmi College, Thoothukudi	**Dr. K. Radha** Associate Professor of Mathematics, PG and Research Department of Mathematics, Thanthai Periyar Government Arts and Science College, Trichy-23. Email: radhagac@yahoo.com
Dr. R.Radha Associate Professor , PG and Research Department Mathematics, Cauvery College for Women (Autonomous), Tiruchirapalli-620018, Tamilnadu. radha.maths@cauverycollege.ac.in	**K.Radhika** Assistant Professor, P.G and Research Department of Mathematics, Rajah Serfoji Government. College(Autonomous),Thanjavur-613005 Email: radhi9791222789@gmail.com
Dr.N.Ramya Associate Professor Bharath Institute of Higher Education & Research, Chennai, drramyamaths@gmail.com	**Dr. K. Rekha** Department of Mathematics, Bishop Heber College, Tiruchirappalli Email: 2rekha.ma@bhc.edu.in
J. Sarthaj Banu, Assistant Professor, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli, jsarthaj@jmc.edu	**Ms. K. Saranya ,** PG Student PG and Research Department Mathematics Cauvery College for Women (Autonomous), Tiruchirapalli-620018, Tamilnadu. ksaran20032002@gmail.com
Dr. D. Saraswathi, Assistant professor M.I.E.T.Engineering College, Trichy.	**Prof. S. Saroja** Assistant Professor Alagappa University College of Physical Education, Alagappa University, Karaikudi
Prof. S. Saroja, Ph.D, (Yoga), Part-Time, SRM-IST, Kattankulathur, Chennai	**R. Sarulatha** Research Scholar, PG and Research Department of Mathematics, Cauvery College for Women(Autonomous), Tiruchirappalli, Tamil Nadu, India. Saruchandran26@gmail.com
Dr. S. Sarulatha Associate Professor of Mathematics, J.J. College of Engineering and Technology Ammapettai, Tamilnadu, India E – Mail: sarulathamaths@gmail.com	**S. Sarumathi** PG Student, PG and Research Department of Mathematics, Cauvery College for Women (Autonomous), Trichy-18
Saurabh Sharma PG Students Department of Mathematics, Bahra University, Waknaghat, Distt. Solan, Himachal Pradesh, India1, BU2022PGMAT07@bahrauniversity.edu.in	**Dr. M. Senthil Kumar** Associate Professor & Head, Department of Yoga, SRM-IST, Kattankulaur, Chennai
B. Shafina Banu PG & Research Department of Mathematics, Jamal Mohamed College(Autonomous), Email: shafinabanu@yahoo.co.in	**S.A. Shanmugavadivu** Assistant Professor, P.G and Research Department of Mathematics, T.V.K. Government. Arts College, Thiruvarur - 610003, Email: sashanmuga25781@gmail.com
Dr. R. Senthil Kumaran Director of Physical Education, Alagappa University, Karaikudi, Tamilnadu. E.mail-Alagappa.Director@gmail.com	**Ms. S. Sharmila** Assistant Librarian AIMAN College of Arts and Science for Women K. Sathanur, Trichy-620 021.

S. Sharmila Banu Assistant Professor, PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-	**Dr. S. Shajitha Begum** P.G. and Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli - 620020, India
J.Shafana Safrin Department of Mathematics AIMAN College of arts and science for women Trichy.	**N. Shihana** Department of Computer Applications AIMAN College Of Arts And Science For Women, TRICHY-620021
S.R. Shimony Rathna Kumari II M.Sc Maths, Reg. No: 20222012515119, P.G and Research Department of Mathematics, A.P.C. Mahalaxmi College for Women, Thoothukudi	**R. Shiny** PG & Research Department of Mathematics, Jamal Mohamed College(Autonomous), Trichy, Tamil Nadu, India-620020. shinyrajendran27@gmail.com
Dr.M. Sivanandha Saraswathy, Assistant Professor, Department of Mathematics Kalasalingam Academy of Research and Education, Krishnankovil-626016 sivanandha@klu.ac.in,	**Z. Sirajunisha** Assistant Professor P.G & Research Department of Mathematics, Jamal Mohamed college (Autonomous), Trichy **nishahussain2010@gmail.com**
J Sneha Dhanalakshmi Srinivasan College of arts and science for women (autonomous), Perambalur	**S. Sri Harini,** Research Scholar, PG and Research Department of Mathematics, Thanthai Periyar Government Arts and Science College,Trichy-23. Email: sriharini.suresh@gmail.com
Dr. V. L. Stella Arputha Mary Associate Professor, PG Research Department of Mathematics, St. Mary's College (Autonomous), Thoothukudi, TN, India. drstellaarputha@gmail.com	**K Subetha** PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy. *1subethakaruppasamy@gmail.com
K Sudha PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy -620020,Tamil Nadu, India, sudhakrishnamoorthy07@gmail.com	**A. Sugirtha** Research Scholar, PG and Research Department of Mathematics, St. Xavier's College (Autonomous), Palayamkottai, Tamil Nadu, Email : sugirtha1994@gmail.com
R.Sugunthakunthalambigai, Assistant Professor of Mathematics, Agricultural Engineering College and Research Institute, kumulur, Trichy, Tamilnadu, India suguntha@tnau.ac.in	**A Thagasin banu** PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Trichy -620020,Tamil Nadu, India, Email: thagasinrumi16@gmail.com
Y. Therese Sunitha Mary Assistant Professor and Head, PG and Research Department of Mathematics, St.Xavier's College (Autonomous), Palayamkottai, Tamil Nadu, India. sunithanepolian@gmail.com	**Y. Therese Sunitha Mary** PG and Research Department of Mathematics, St.Xavier's College (Autonomous), Palayamkottai - 627 002, Tamil Nadu. sunithanepolian@gmail.com
M. Umamaheswari II M.Sc Maths, (Reg. No. 20222012515121) P.G and Research Department of Mathematics A.P.C. Mahalaxmi College Thoothukudi	**Dr. R. Vasumathi** Assistant professor, PG department of computer science AIMAN College of arts and science for women, Trichy
S.R. Veronica Valli Research Scholar, PG and Research Department of Mathematics, A.P.C. Mahalaxmi College for Women, Thoothukudi.	**J.Vasanthi** Research Scholar Bharath Institute of Higher Education & Research,Chennai,Tamil Nadu vasanthij1977@gmail.com 9940014067

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- A similar study may be conducted on laymen of different age groups and sex.

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ARTIFICIAL INTELLIGENCE TOOLS IN EDUCATION SYSTEM

Dr.M.Munafur Hussaina[1] and Ms.M.Ayesha Rukshana[2]

1*VP & Head, Department of Computer Science, Department of Computer Science,AIMAN College of Arts and Science for Women, Trichy-21.
2*Student, Department of Computer Science, Department of Computer Science,AIMAN College of Arts and Science for Women, Trichy-21.

ABSTRACT

AI is one of the most widely used technologies in the education system. It opens up new possibilities and challenges for customizing the learning process for students and learners. Nowadays, education institutions face diverse challenges, like dropouts of students, a lack of personalized learning systems, the unavailability of textbooks, a lack of data for researchers, etc. AI enhances the education system worldwide through various tools and platforms. It offers several benefits, including improved accessibility, tutoring, automated grading, and streamlined workflows. This paper analyzes the various AI tools used in the education system to help students and tutors improve their skills, performance, and outcome strategies.

Keywords: AI, Artificial Intelligence, Education System, ChatGPT, Tools, Learning System.

INTRODUCTION

Today, many priorities for improvements to teaching and learning are unmet. Educators seek technology-

enhanced approaches addressing these priorities that would be safe, effective, and scalable. Naturally, educators wonder if the rapid advances in technology in everyday lives could help. Like all of us, educators use AI-powered services in their everyday lives, such as voice assistants in their homes. They have the opportunities to use AI-powered capabilities like speech recognition to increase the support available to students with disabilities, multilingual learners, and others who could benefit from greater adaptively and personalization in digital tools for learning. Higher Education Institutes (HEI) are already using Artificial Intelligence in many forms to research, develop, evaluate, and teach. Integration of information and communication technology (ICT) in the classroom is becoming increasingly significant.

AI is any technology that enables a computer or computer based machine to respond to situations that were not anticipated by the computer programmer. Artificial intelligence (AI) has the potential to revolutionize the way we think about education. From personalized learning algorithms to virtual and augmented reality, AI-powered tools and technologies are helping to enhance the learning experience for students in ways we never thought possible. AI can analyze vast amounts of educational data to identify trends and patterns. This is especially useful for school administrators and decision-makers in education. AI can predict student performance and help design strategies to improve outcomes. It can also identify areas where additional support is needed.

AI models are useful for identifying patterns, making predictions, or analyzing alternative decisions. AI-driven tools can create interactive learning environments, such as simulations and virtual reality, enhancing comprehension and engagement. AI tools can provide instant feedback on assignments and exams, helping students understand their strengths and areas for improvement. Artificial Intelligence (AI) has revolutionized various industries, and the education sector is no exception. With its ability to process vast amounts of data, analyze patterns, and make intelligent

decisions, AI has become a valuable tool in enhancing the learning experience for students and teachers alike. In this introduction, we will explore the applications of AI and its tools in the education system, highlighting the benefits and potential challenges.

Furthermore, AI can assist teachers in automating administrative tasks, such as grading assignments and managing student records. This automation allows educators to allocate more time and energy towards student engagement, instructional planning, and individualized support. AI can help identify areas where teachers may need professional development, providing insights into their teaching practices and suggesting strategies for improvement. While the integration of AI in education holds immense potential, it is important to address certain challenges. Privacy concerns, ethical considerations, and the need for human interaction are critical factors to consider when implementing AI tools in the education system. Striking a balance between AI and human involvement is crucial to ensure that students receive a holistic and well-rounded education.

LITERATURE REVIEW

ISHFAQ MAJID and et.al [1] suggested AI Tools and techniques in education for creating a Holistic learning environment for students and faculty is it helps the students to plan their career and achieving their goals. AI can analyze the student's personalized learning experience and improve the learning outcomes of the students.

Ayse Begum Aslan and et.al[2] discuss with that ai will open up new opportunities for students and learners when compared to normal classroom teaching tools the data obtained from the study exhibits themes as products that emergence outcomes with use of AI in education drawbacks in AI benefits and services in use of AI.

Ayman Bassam [3] reported or experiences study that AI brought potential benefits to education bridges the gaps below Innovation and applications generates practical examples innovates technical experts and future research directions for multiple perspectives.

Valentine Joseph and et.al [4] presented the challenges and effective of in educational assessment the application of AI can ultimately transform education improves landing outcomes and equip students with skills needed.

Abhinay and et.al[5] described that AI help in assisting educators and students in growing research produces better results than conventional approaches in many circumference machine based teaching is feasible even if it's lacks the emotional effect of traditional one.

Shubh Raat Jain and Roshita Jain[6] analysed that implementing in higher education institute is enhancing learning capacity of students to a large extent and holds massive future prospects in industry sector. The challenges were implementing in Ai were turning point in learning methodology for the benefit of student and teacher
educational model building provide opportunities for growth in future.

Arpit Sanjay [7] invested that use of AI platforms and tools enabled teacher effectiveness and efficiency resulting in improved instructional quality of personalization learning materials to the needs and capabilities of students.

AI TOOLS IN EDUCATION SYSTEM

SPECTRUM

Spectrum is an advertising tool created by Connectivity Company used in commercial television business. This tool is used to create on-board commercial businesses to allow AI concept instead of voice actors within five minutes. This spectrum tool helps the marketers to advertise in low cost to local businesses.

DROPBOX

Dropbox is a cloud-based file hosting service that aims to reinvent the productivity tool. Users can store, sync, sign and send large files nearly instantly within a streamlined interface. The Dropbox AI feature allows users to pose questions about or request summaries of files, while Dropbox Dash uses AI to power a universal search that coheres a user's tools, content and apps into one search bar.

SYMANTEC

Symantec is an AI tool mainly used for protecting digital assets through

cybersecurity with the help of machine learning technology. This tool secures the virtual assets from security threats, differentiate good and malicious files independently. Symantec AI tool running their updates automatically to new platform and protect the website from malwares.

HARVER

The artificial intelligent reduces the work flow and increases the smartness in human work. Harver is a recruiting AI tool which streamline the recruiting process in centralizing steps through end to end platform. The recruiting process such as candidates interaction, cognitive screening, interview scheduling and checking of references can be automatically which cut off the 40 percent of human interaction.

TABLEAU

Tableau is a business intelligence tool used for visualization of industry data and form business strategies. The augmented analytics features in tableau helps the users to get access to data insights more quickly than manual methods. Verizon, Lenovo, Hello Fresh and REI Co-op are some of the examples of tableau's client.

SALESFORCE

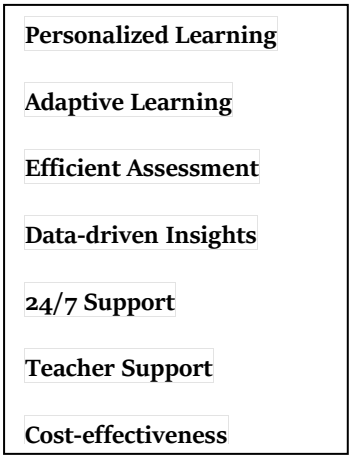
Salesforce is a machine learning based cloud integrated software which can be used for customer services, sales and product development operations. The salesforce app named Einstein AI which assist the employees for recommendation of input data and automate the data to decision making. Companies can be scalable from startup to major corporations. Variety of apps can be integrated with salesforce to customize their interface to meet their specific needs.

SAS

SAS is an AI data management program that relies on open source and cloud-enablement technologies to help companies direct their progress and growth. SAS's platform can handle an array of business functions including customer intelligence, risk assessment, identity verification and business forecasting to help companies better control their direction, according to the company's site.

ADVANTAGES OF AI TOOLS

Integrating AI tools into the education system brings forth a myriad of advantages, revolutionizing traditional learning approaches. From personalized learning experiences to enhanced administrative tasks, AI presents a transformative potential that caters to the diverse needs of students, educators, and administrators alike. Let's delve into the multifaceted benefits of AI in education, paving the way for a more efficient, engaging, and inclusive learning environment.



PERSONALIZED LEARNING

AI algorithms can analyse student data and behaviour to create personalized learning experiences tailored to individual needs, preferences, and learning styles. This personalized approach enhances student engagement and improves learning outcomes.

ADAPTIVE LEARNING

AI-powered adaptive learning systems adjust the pace and content of instruction based on students' progress and performance, ensuring that each student receives appropriate challenges and support to maximize their learning potential.

EFFICIENT ASSESSMENT

AI can automate the assessment process, including grading assignments, quizzes, and tests. This saves educators time and enables them to provide more timely and detailed feedback to students, facilitating their understanding and growth.

DATA-DRIVEN INSIGHTS

AI tools can analyse large datasets to identify patterns and trends in student performance, helping educators make data-driven decisions to improve teaching methods, curriculum design, and student support services.

24/7 SUPPORT

AI-powered chatbots and virtual tutors can provide round-the-clock support to students, answering questions, providing

explanations, and offering assistance with assignments whenever needed, thereby extending learning beyond traditional classroom hours.

TEACHER SUPPORT AND PROFESSIONAL DEVELOPMENT

AI tools can assist educators in lesson planning, curriculum development, and professional development by providing resources, feedback, and recommendations based on best practices and research findings.

COST-EFFECTIVENESS

While initial implementation costs may be significant, AI tools have the potential to reduce long-term costs associated with tasks such as grading, tutoring, and administrative work, leading to cost savings for educational institutions over time.

EARLY INTERVENTION

AI algorithms can identify students who may be struggling academically or at risk of falling behind early on, allowing educators to intervene proactively with targeted interventions and support to prevent further academic decline.

Overall, AI tools have the potential to transform the education system by making learning more personalized, accessible, efficient, and effective for all students, educators, and stakeholders involved.

CONCLUSION

AI and its tools have revolutionized the education system by providing innovative solutions to enhance learning experiences. AI-powered tools such as virtual tutors, personalized learning platforms, and intelligent grading systems have the potential to adapt to individual student needs, provide real-time feedback, and offer personalized recommendations. These tools can also assist teachers in administrative tasks, allowing them to focus more on student engagement and instruction. However, it is important to strike a balance between AI and human interaction to ensure a holistic and well-rounded education. With continued advancements in AI technology, the future of education holds great promise in creating more inclusive, personalized, and effective learning environments.

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IMPACT OF LADDER TRAINING ON SELECTED SPEED AND AGILITY PARAMETERS AMONG COLLEGE MEN HANDBALL PLAYERS

***P.EDWIN THOMAS,**

Assistant Professor, National College, Trichy

ABSTRACT

The purpose of the study was to investigate the impact of Ladder training on selected speed and agility parameters among college men handball players. For the purpose of the study, 30 male handball players were selected from National College, Trichy. The subjects were underwent Ladder training for three days per week for six weeks. The researcher had been selected the following variables for the present study. Physical fitness variables i: e speed and agility. The data was collected before and after six weeks of training. The participants were tested on speed (50 meter dash) and agility (shuttle run). The data was analyzed by applying analysis of co-variance (ANACOVA). The level of significance was set at 0.05. The findings of the present study have indicated that Ladder training of six weeks have significant effect on selected ladder training I: e speed and agility of men handball players.

Keywords: Ladder Training, speed and agility

INTRODUCTION

The agility ladder is a time tested and proven effective tool for improving our footwork. The training effect is similar to jump rope, but with several advantages. First, agility ladder training is