



RSE CONNECT DIGITAL NEWSLETTER

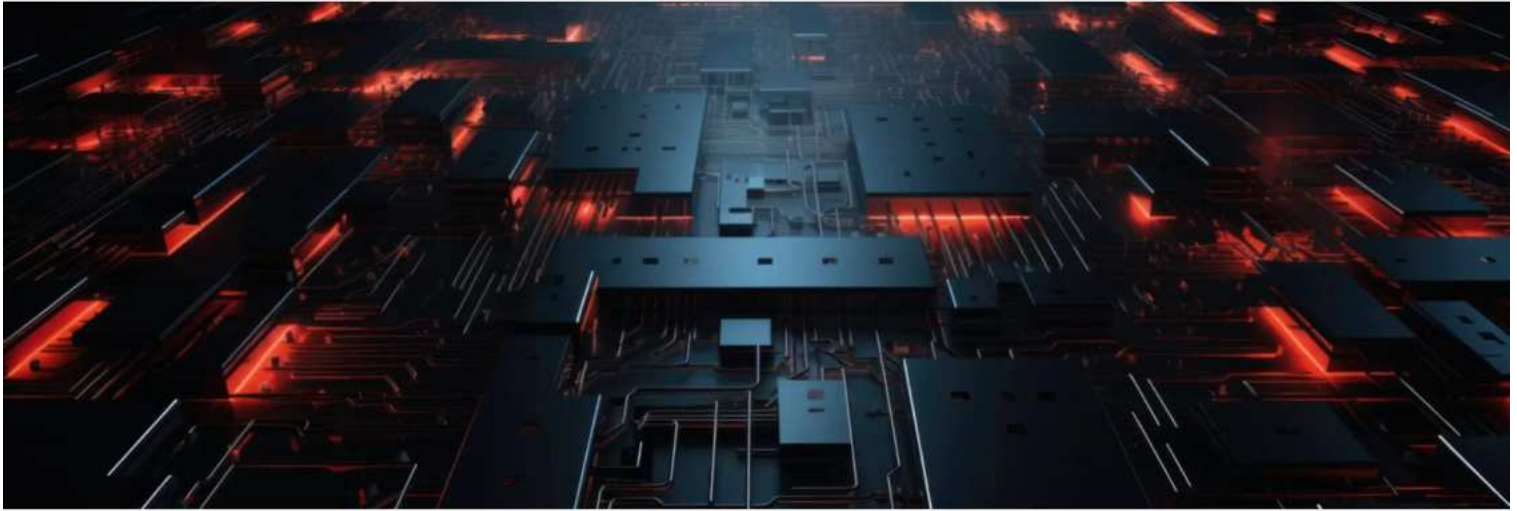
OCTOBER TO DECEMBER 2024

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ABOUT RAI SCHOOL OF ENGINEERING



Rai School of Engineering is a constituent School of Rai University, established in 2013, and consists of Diploma, B.Tech, BCA, B.Sc. IT, and MCA programmes. RSE emphasizes on Skill Development, Project-Based Learning and ICT enabled pedagogies to provide Outcome Based Education to the budding student fraternity. RSE is powered by distinguished faculties who focus on quality Research Papers, Chapters and Books in addition to Patent publication and grants.

VISION

To be a center of excellence in technical higher and professional education, research and support services, capable of making significant contribution to individual and societal empowerment.

MISSION

To create technically qualified world-class professionals with social commitment through career oriented courses conducted by high profile faculties, complemented with globally interactive learning processes and leading edge technology.



► CSE/IT Department

Vision : To emerge as front runner in Computer Science and Engineering education and to transform the students into globally competent professionals with expertise in software development and aptitude for research and ethical values.

Mission :

- Inculcate problem solving and team building skills.
- Provide the necessary conducive environment for promoting Analytical Learning.
- Provide the ambience to become industry ready Professionals, Researchers and Entrepreneurs by offering courses on cutting edge technology and advanced laboratory courses for the students.
- Create positive mindset for digital automated and innovative solutions.

► CSA Department

Vision : To produce competent Computer Science and Application oriented Professionals to meet the changing global needs.

Mission :

- To promote problem solving and programming capabilities.
- To enable learners to prepare for the changes in Emerging Software Applications.
- To provide Industry collaboration and promote quality learning using Computing facilities.

► Mechanical Engineering Department (Diploma)

Vision : To develop students into technically competent and talented professionals capable of meeting the requirements of industry and society

Mission :

- To providing an economical and high-quality technical education to satisfy ever-changing and demanding needs through a supportive Teaching-learning environment.
- To Providing service to society and industry by creating people with technical capabilities and an entrepreneurial spirit.
- To providing comprehensive education with professional moral principles to promote learners harmonic growth.

► Civil Engineering Department (Diploma)

Vision : To produce competent Engineers with the necessary skills and abilities to meet the Emerging requirements.

Mission :

- To enrich the knowledge and competencies required at par with changing methods.
- To prepare learners for knowledge enhancement with value and ethics.
- To ensure facilities for quality and life-long learning.



Message from the Head of Department



Mr. Jigar D. Pandya

Head of the Department,
Dept. of Computer Science and Applications,
Rai School of Engineering, Rai University, Ahmedabad

Dear Students,

I am filled with immense pride and joy as I extend my heartfelt congratulations to each one of you for the outstanding results in your recent examinations of Odd Semesters for AY 2024-25. Your dedication, hard work, and perseverance have truly paid off, and these results are a testament to your commitment to excellence. I would also like to extend my appreciation to our faculty and staff whose continuous support and guidance have played a significant role in your academic journey.

As we celebrate these accomplishments, I urge you all to view this achievement as a stepping stone towards even greater heights. The field of Computer Science is ever-evolving, and with each challenge you face, there lies an opportunity to grow, innovate, and make a difference in the world. Let these results fuel your passion for learning and inspire you to push the boundaries of your potential.

Remember, success is not only defined by marks and grades but by the ability to stay curious, embrace new ideas, and strive for continuous improvement. Keep up the excellent work, and always aim to achieve more, both academically and personally. Together, let's continue to foster a culture of excellence, innovation, and resilience. Stay motivated, stay focused, and keep shining!

With warm regards,

Mr. Jigar D. Pandya

Head of the Department,
Dept. of Computer Science and Applications,
Rai School of Engineering,

EXAM TOPPERS

Congratulations to all the students who performed exceptionally well in the Odd Semester Exams for B.Tech CSE/IT, B.Sc IT, BCA, and Diploma CE/IT programs! Your hard work, dedication, and commitment to your studies have paid off, and this achievement is a reflection of your perseverance and academic excellence. We are proud of your accomplishments and encourage you to continue pursuing your goals with the same enthusiasm and determination. Keep shining and continue striving for success in your academic and professional journeys. Best wishes for your future endeavours!

B.Sc (IT) Sem-1



Dudhat Ishita Nareshbhai
SGPA: 8.36



Gupta Pranjal Manishbhai
SGPA: 7.64



Bhumi Gunvantbhai Maheriya
SGPA: 7.55

B.Sc (IT) Sem-3



MD Ajmal Hussain
SGPA: 9.38



Ritesh Marand
SGPA: 8.95



Vaishnavi Sunil Koli
SGPA: 8.90

B.Sc (IT) Sem-5



Shital Bavaliya
SGPA: 10



Sanjana Panchal
SGPA: 10



Ankita Patel
SGPA: 9.36



Harshita Jain
SGPA: 9.27



BCA Sem-1



Jaswanth Maddipati
SGPA: 8.36



Khyati Panday
SGPA: 7.82



Kothari Inkal
SGPA: 7.82



Solanki Soham R.
SGPA: 7.64

BCA Sem-3



Prajapati Yashwant
SGPA: 8.92



Chaudhari Akash
SGPA: 8.36



Singh Ajay
SGPA: 8.28



Govani Tasnimfatema
SGPA: 8.28

BCA Sem-5



Prena Nagla
SGPA: 9.23



Momin Shakerfatema
SGPA: 9.18



Korat Vivek
SGPA: 8.41



Parmar Kamalbhai
SGPA: 8.41

B.Tech CSE Sem-1



Panchal Tanya
SGPA: 10



Jenil Savalia
SGPA: 9.95



Mavani Priyukumar
SGPA: 9.95



Waykar Mayur
SGPA: 9.95



Kaneriya
Kalpankumar
SGPA: 9.95



Isha patel
SGPA: 9.95



B.Tech CSE Sem-1



Divraniya
Arjun
SGPA: 9.95



Shivam Singh
Negi
SGPA: 9.95



Priyasha
Yadav
SGPA: 9.95



Pathan
Zuveriya
SGPA: 9.95



Lodhiya
Khushi
SGPA: 9.95



Homasvi
Kaneria
SGPA: 9.9

B.Tech IT Sem-1



Yashvi Dholakiya
SGPA: 9.76



Maghodiya Nikhil Vitthalbhai
SGPA: 8.48



Anshul Rana
SGPA: 8.33

B.Tech CSE Sem-3



Parmar Abhishrut Mehulkumar
SGPA: 9.14



Gaikwad Mrunal Bhimsen
SGPA: 8.91



Sharma Abhishek Sanjay
SGPA: 8.59

B.Tech IT Sem-3



Parbatani Rohan Ajitbhai
SGPA: 7.82



Shaikh Mohammed Umar
Mohammed Yusuf
SGPA: 7.50



Patel Vijaykumar Shravankumar
SGPA: 7.45



B.Tech CSE Sem-5



Pathar Asmita Jivabhai
SGPA: 9.21



Rajput Ashutoshsingh
SGPA: 8.75



Ram Ji Mishra
SGPA: 8.42

B.Tech IT Sem-5



Pandya Vivek Pareshbhai
SGPA: 8.04



Vasaya Alis Firozbhai
SGPA: 7.71



Seth Vishal Hareshbhai
SGPA: 7.63

B.Tech IT Sem-7



Panchal Disha Atulbhai
SGPA: 9.21



Kapoor Prameet Ajay
SGPA: 8.88



Mediseti Indu
SGPA: 8.88



Bagadiya Harsh
SGPA: 8.79

B.Tech CSE Sem-7



Rishita Sangani
SGPA: 9.79



Dhara Pandya
SGPA: 9.21



Sashank Kumar
SGPA: 8.67

Diploma CE Sem-1



Kamble Kashish Gajendrakumar
SGPA: 9.79



Bari Simaran Rajeshprasad
SGPA: 9.21



Precious John Manoharan
SGPA: 8.67

Diploma IT Sem-1



Panchal Yancy Hiteshkumar
SGPA: 9.79



Dhruvi Nileshbhai Baru
SGPA: 9.21



Kunal Maheshwari
SGPA: 8.67

Diploma CE Sem-3



Bhamre Zankhna Pankajbhai
SGPA: 9.32



Prajapati Ronak Rajubhai
SGPA: 9.23



Jaisval Krunal Sunilkumar
SGPA: 8.23

Diploma IT Sem-3



Aryan Joshi
SGPA: 8.50



Chunara Gopalbhai Rohitbhai
SGPA: 7.91



Patel Princekumar
Shaileshkumar
SGPA: 7.73



Diploma CE Sem-5



Oza Tathy Anilkumar
SGPA: 9.43



Shaikh Mo Tosif Mayuddin
SGPA: 9.17



Upadhyay Divya Vishal
SGPA: 7.35

Diploma IT Sem-5



Riddhi Bavaliya
SGPA: 9.65



Zala Rinku MohabbatSinh
SGPA: 9.22



Patel Prashant Jintendrakumar
SGPA: 8.30

EVENTS

NAVRATRI CELEBRATION

Our Navratri celebration, RU Ratri 2024, was a resounding success, bringing together students and faculty members in a vibrant display of tradition and culture. The event began with a heartfelt Aarti of Goddess Durga, setting a spiritual tone for the festivities. Everyone dazzled in beautiful chaniya cholis and elegant kurtas, showcasing the richness of traditional Indian attire. The atmosphere was electric, filled with energy as participants twirled and spun, fully immersed in the rhythm of Garba. Under the enchanting lights of RU Ratri, everyone showcased their best Garba moves, creating unforgettable memories that will be cherished for years to come.

This celebration not only highlighted the richness of our cultural heritage but also fostered a strong sense of community and joy among attendees. It was heart-warming to see students and faculty members come together, celebrating with laughter and camaraderie.

RU Ratri 2024 truly captured the spirit of Navratri, reminding us of the importance of unity and celebration in our lives. We extend our gratitude to everyone who participated and made this event a memorable one.





DIWALI CELEBRATION

The department celebrated the joyous festival of Diwali with great enthusiasm and vibrancy, bringing together faculty and staff to mark the occasion in a traditional yet lively manner. The celebrations aimed to foster unity, promote cultural appreciation, and spread the essence of the festival—light, joy, and prosperity.

The event commenced with the ceremonial lighting of diyas, symbolizing the triumph of light over darkness and good over evil. The department was adorned with colorful rangoli designs, twinkling lights, and vibrant decorations, creating a festive ambiance that resonated with the spirit of Diwali.

A series of activities and cultural performances added charm to the celebration. Faculty members participated enthusiastically in events such as Diya decoration, traditional games, and a rangoli-making competition. A cultural showcase featuring traditional music and dance performances further highlighted the festive fervour, with many faculty members joining in to showcase their hidden talents.

A series of activities and cultural performances added charm to the celebration. Faculty members participated enthusiastically in events such as Diya decoration, traditional games, and a rangoli-making competition. A cultural showcase featuring traditional music and dance performances further highlighted the festive fervour, with many faculty members joining in to showcase their hidden talents.



DATA ANALYTICS USING PYTHON:

The seminar on "Data Analytics Using Python," held on October 23, 2024, from 10:00 AM to 1:00 PM, was a well-organized and impactful event aimed at providing participants with a comprehensive understanding of Python's capabilities in the realm of data analytics. The session began with an introduction outlining the objectives and agenda, followed by an engaging presentation on the significance and applications of data analytics across various industries. The speaker provided a detailed overview of essential Python libraries, such as Pandas, NumPy, and Matplotlib, showcasing their practical use in data manipulation, visualization, and analysis through live demonstrations. A hands-on session allowed participants to work directly with sample datasets, applying the techniques and concepts they had learned, which greatly enhanced the learning experience. The interactive Q&A segment further clarified doubts and addressed queries regarding the broader applications of Python in data-driven decision-making.



Rai University
 ESTABLISHING THINKING MINDS

SSIP, IIC, RAI SCHOOL OF ENGINEERING, CORPORATE RESOURCE CELL, RAI UNIVERSITY, AHMEDABAD

SEMINAR ON DATA ANALYTICS USING PYTHON

23 October, 2024
 10:00 am to 01:00 pm
 Venue : Seminar Room, Rai University

Mr. Krunal Jani
 Sr. Technical Trainer,
 Logicrays Technologies

Organized by:
 SSIP, IIC, Rai School of Engineering,
 Corporate Resource Cell,
 Rai University, Ahmedabad

www.raiversity.edu



The event concluded with feedback collection and a vote of thanks, acknowledging the efforts of the organizing team and the enthusiasm of the attendees. The seminar was met with positive feedback, with participants commending its practical approach and expressing interest in future sessions on advanced topics like machine learning. Overall, the event was a success, fostering a deeper appreciation for Python's role in data analytics and equipping participants with valuable skills.



NAVOTHAN

For B.Tech, BCA, B.Sc.IT

"Navothan: A Celebration of Rejuvenation," held on December 9, 2024, at Rai University, Ahmedabad, was a dynamic and inspiring event that symbolized renewal, growth, and vibrant energy. Designed to reignite enthusiasm among students at the start of a new semester, the program brought together over 150 participants for a day filled with engaging activities and meaningful interactions. The event featured a variety of games and interactive sessions that fostered camaraderie, creativity, and intellectual stimulation,



creating a platform for students to connect, learn, and empower themselves. "Navothan" not only celebrated the spirit of rejuvenation but also set the tone for an enriching academic journey, leaving attendees motivated and excited for the opportunities ahead.



ARTICLE COMPETITION:

On December 24, 2024, Rai University hosted an exciting article competition organized by the Rai School of Engineering (RSE), where students were given an opportunity to showcase their writing and analytical skills. The event, scheduled from 10:00 AM to 12:00 PM, encouraged participants to delve into a wide range of topics related to engineering, technology, and innovation. The competition was open to all students, providing a platform for both undergraduate and postgraduate students to express their ideas on relevant contemporary issues and challenges in their respective fields.



The competition saw a great deal of enthusiasm and creativity from the participants. Students were given a specific set of topics related to engineering advancements, sustainable practices, and the future of technology. They were tasked with crafting articles that were not only informative but also reflected their critical thinking and ability to present complex concepts in an engaging and clear manner. The entries were judged based on several parameters, including originality, clarity of thought, coherence of ideas, and writing quality.



CHRISTMAS CELEBRATION

The students of Rai University came together to celebrate the spirit of Christmas on 24th Dec, 2024, transforming the campus into a festive wonderland filled with joy and enthusiasm. The event was marked by vibrant decorations, including a beautifully adorned Christmas tree, twinkling lights, and cheerful ornaments that set a merry mood.



BAAL VEER DIVAS

On December 26, 2024, Rai University celebrated Baal Veer Divas, organized by the NSS (National Service Scheme) unit. The event aimed to honor the spirit of childhood, promoting awareness about child rights, and celebrating the joy and innocence that children bring to the world. The celebration included a variety of fun and engaging activities, such as games, performances, and interactive sessions, highlighting the importance of child protection and education. Students, faculty, and NSS volunteers came together to make the event a memorable one, fostering a sense of responsibility and empathy toward children's well-being in society.



FACULTY ARTICLES

Mr. Meet Bakotia

Assistant Professor
Mechanical Engineering, RSE
Rai University
Ahmedabad



Experiential Learning: New Age Teaching-Learning Pedagogy

Experiential learning is a pedagogical approach that emphasizes hands-on experience and real-world application, revolutionizing the traditional teaching-learning paradigm. This innovative methodology enables learners to acquire knowledge, skills, and competencies through direct experience, reflection, and experimentation.

Key Principles of Experiential Learning

1. Learning by Doing: Learners engage in activities, projects, or simulations that mimic real-world scenarios.
2. Reflection and Feedback: Learners reflect on their experiences, receive feedback, and adjust their approach.
3. Experiential Cycle: Learners progress through a cycle of experience, reflection, and application.

Benefits of Experiential Learning

1. Deeper Understanding: Learners develop a deeper understanding of concepts and their practical applications.
2. Improved Retention: Experiential learning enhances retention rates, as learners connect theoretical concepts to real-world experiences.
3. Development of Soft Skills: Learners cultivate essential soft skills, such as teamwork, communication, and problem-solving.
4. Enhanced Employability: Experiential learning prepares learners for the workforce, equipping them with relevant skills and experience.

Implementing Experiential Learning

1. Project-Based Learning: Integrate real-world projects into the curriculum.
2. Internships and Fieldwork: Provide opportunities for learners to engage in practical experiences.
3. Simulations and Games: Utilize interactive simulations and games to mimic real-world scenarios.
4. Industry Partnerships: Collaborate with industries to provide learners with authentic experiences.

Conclusion

Experiential learning is a transformative pedagogy that prepares learners for the complexities of the real world. By incorporating experiential learning into educational programs, institutions can foster a new generation of learners who are equipped with the skills, knowledge, and competencies required to succeed in an ever-evolving world.

Please note that this is a general content and you should adjust it according to your needs and requirements. Also, make sure to cite any sources you use to avoid plagiarism.

Ms. Megha Sharma

Assistant Professor
Computer Science and Engineering, RSE
Rai University
Ahmedabad



Study with Analogies: The Fun Way to Remember Anything

Have you ever struggled with a subject until someone simplified it with a basic comparison? Analogies have the power to simplify difficult concepts.

Think about how machines identify patterns—like separating oranges from apples. Machine learning, like a child, learns from examples, it requires direction, and has limited capacity for making decisions. Conversely, deep learning is more like a teenager: more independent, able to manage difficult jobs, and learning from vast information volumes. Like teenagers, deep learning models, however, need additional resources—lots of data and processing capability. Does that help to simplify these complicated terms?

Analogies clarify complex ideas while preserving their essence. They enable us to link the unfamiliar with the familiar. As a learner, I have often found that connecting difficult concepts to things I already know helps me to grasp them faster and shows the whole picture instead of losing myself in details. Analogies help anyone enjoy learning. Consider a stack of dishes in the kitchen: the last plate added is the first one taken off, much as in "stack". Imagine also waiting in line for coffee; a "queue" runs the same manner, serving the first person in line first.

Learning shouldn't be a chore. Whether you work as a teacher or a student, I advise you to relate challenging ideas by means of analogies. Link fresh ideas to common events or personal knowledge. This method can make learning a more interesting process—and even enjoyable.



FACULTY ACHIEVEMENT

Prof. (Dr.) Sailesh Iyer

Professor and Dean,
Rai School of Engineering,
Rai University



Congratulations to Prof. (Dr.) Sailesh Iyer, Dean, Rai School of Engineering for the Edited Book titled "Digital Twins for Smart Cities and Villages" published by Elsevier & 2 Chapters Publication.



Digital Twins for Smart Cities and Villages
2025, Pages 249-271

Chapter 12 - Immersive learning trends using digital twins

Praveen Kumar Pandey¹, Samriti Mahajan¹, Prashant Kumar Pandey², Justin Paul³, Sailesh Iyer⁴

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Outline | Share | Cite

<https://doi.org/10.1016/B978-0-443-28884-5.00012-0>
Get rights and content

Abstract

This comprehensive literature review delves into the evolving realm of digital twin-enabled immersive learning in education. It aims to consolidate existing research, examining the prospective advantages, prevalent trends, challenges, and emergent developments within this innovative educational sphere. This study systematically reviews pertinent literature on digital twins, immersive technologies, and pedagogical theories to identify and evaluate the state of the field. The objective is to provide insights into the dynamics of digital twin-enabled immersive learning. The objective of this chapter is to uncover the potential of digital twin-enabled immersive learning in



Digital Twins for Smart Cities and Villages
2025, Pages 273-293

Chapter 13 - Digital Twin and Virtual Reality, Augmented Reality, and Mixed Reality

Prashant Kumar Pandey¹, Praveen Kumar Pandey², Samriti Mahajan², Justin Paul³, Sailesh Iyer⁴

Show more

Outline | Share | Cite

<https://doi.org/10.1016/B978-0-443-28884-5.00013-0>
Get rights and content

Abstract

This study investigates the integration of Digital Twin technology with immersive technologies, including Virtual Reality Augmented Reality and Mixed Reality and its impact on various sectors. Through a systematic review of existing literature, academic papers, and case studies, the research identifies key trends, research gaps, potential disruptions, and collaborative efforts in shaping industries and experiences. The findings indicate that the convergence of Digital Twins and immersive technologies brings about significant changes across sectors. Manufacturing benefits from enhanced efficiency and



Invited as Resource Person at 5 day FDP on “Next-Gen Communication in Basic Science and Humanities : Paving the path forward” from 18th - 22nd November 2024.



The Bioscan (192) 8.3(1), 270-276, 2024

www.bioscan.com

Fishery supply chain traceability by using blockchain

Madhuri B. Patil^a, Dr. Saitesh Iyer^b

^a Research Scholar, Computer Science Engineering Department, Rai University, Ahmedabad.

^b Professor Computer Science Engineering Department, Rai School of Engineering, Rai University, Ahmedabad, Gujarat, India.

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DOI: <https://doi.org/10.63001/tbs.2024.19.02.S.I.1.pp270-276>

KEYWORDS
supply chain,
Blockchain,
smart contracts,
Traceability

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08-08-2024

Accepted on:

25-11-2024

ABSTRACT

The risk to food safety has increased due to a rise in global food demand. The number of fish consumed has grown over time. Presently, aquaculture farms provide over half of the fish that people eat. Similar to other food goods, fish and fishery products need to be traceable in order to foster public confidence about the fish's journey through the value chain or to recall fish lots in the event that there is a health risk to the public. The fishing sector boosts the country's economy and is very susceptible to risks due to its lengthy shipping times, short consumption windows, and seasonal fluctuations in trade volume. The increasing number of research demonstrates how the Blockchain can be used in the food sector in conjunction with application cases across many geographies. Together with smart contracts, Blockchain creates an unchangeable and transparent framework that enables complex business solutions. This article details the analytical steps of a project that intends to provide a platform for combining all the data regarding the fish's origin and every stage of its journey, including high-quality information, and it reaches the end user. A Blockchain technology framework for the fisherman is proposed in this paper. Additionally, this study will look into how Blockchain technology can be integrated into the supply chain. In this work, we describe an Ethereum Blockchain-based private system that may be used to manage fishing supply chain operations in a secure, confidential, transparent, decentralized, and reliable manner.

INTRODUCTION

The consumption of fish has increased significantly in the last few decades due to population growth and shifting consumer habits. In the human diet, fish has grown in importance as a source of protein. Saghari et al. claim that while fish consumption is rising annually, the seafood sector is likewise evolving. Half of the seafood produced worldwide is currently produced through aquaculture [1]. If non-food applications are taken out of the equation, aquaculture currently accounts for 58% of the consumption of fisheries products [2]. Since the late 1980s, the output of catch fisheries has been rather stagnant, therefore, aquaculture has had to adjust to the changing preferences of consumers. Food safety is now a crucial marketing concern in addition to a public health concern. Customers want to know exactly what they are purchasing or consuming. Governments, like the European Union, are putting out directives that mandate the registration of a product's origin [3], enhancing product traceability and expediting recalls when needed. The benefits of traceability in networks of fish suppliers examined by the authors of [4].

The study determines and outlines the benefits that can be quantified, and it concludes that fish supply chains with traceability will:

- When necessary, lower the expenses associated with product recalls and expedite the recall process.
- Lower the FSA, expenses, and negative effects of foodborne disease outbreaks, including misdiagnosis and medical expenses.
- Enhance the company's image and support preserving

the product's credibility with the market and customers. In order to identify the information that must be gathered on a common platform to support the traceability of fish and fishery products from the sea or aquaculture farms to the plate, the main goal of this paper is to identify all stakeholders involved and understand the business processes involved in the value chain of high products capture and aquaculture. In order to accomplish two major goals, the project's analysis phase is being described in this article. The project's goal is to create a traceability platform.

- To provide the opportunity for end customers to become fully informed about the fish products they are purchasing. The buyer needs to be able to provide information about the fish's origin (where it was raised or captured), its creator or capturer, when it was captured, how it was stored, where it was transported, how it underwent transformation, and other details.
- If a product is needed to be recalled due to food contamination or another harm to the public's health, to provide the authorities with the information regarding the fish. All fish that are raised or captured at a specific location on a given date, whether they are delivered by a specific vehicle or kept in a specific warehouse, etc., will be listed on the platform.

Paper Publication Titled: “Fishery supply chain traceability by using block chain” The Bioscan, 19(Special Issue-1), 270–276. [https://doi.org/10.63001/tbs.2024.v19.i02.S.I\(1\).pp270-276](https://doi.org/10.63001/tbs.2024.v19.i02.S.I(1).pp270-276)



Invited as a keynote speaker in 2024 6th International Conference on Economic Management and Model Engineering (ICEMME) and presented keynote speech on Recent Trends of Machine Learning in Economic Management



Received appreciation and recognition for being the resource person of 6 days ATAL online FDP on advanced computational techniques in machine learning: a comprehensive faculty development program utilizing R software.

Published a book chapter titled “Machine Learning for bone deformation detection in real-world applications” in a Elsevier Book.





He has co-authored Chapter 9, titled "Navigating the Future: Unmanned Aerial Systems in IoT Paradigms," published on December 13, 2024. The chapter explores the transformative potential of integrating unmanned aerial systems (UASs) into Internet of Things (IoT) frameworks. It provides a comprehensive analysis of the synergies between UASs and IoT, focusing on their unique capabilities and disruptive applications. This collaboration results in a dynamic ecosystem that enables advancements in data collection, real-time analytics, and autonomous operations. The chapter outlines core components and functionalities, offering valuable insights into the innovative convergence of these technologies.

Chapter 9

Navigating the Future

Unmanned Aerial Systems in IoT Paradigms

Chandrakant Mahabiyja, Sailesh Iyer, Mahendra Verma, Prabhat Ranjan Mishra, Shalendra Kumar Bohidar

Book Editor(s): Sachin Kumar Gupta, Manoj Kumar, Anand Nayyar, Shubham Mahajan

First published: 13 December 2024 | <https://doi.org/10.1002/97811394235648.ch9>

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Summary

The chapter delves into the potential for transformation that arises from the integration of unmanned aerial systems (UASs) into Internet of Things (IoT) frameworks. Its objective is to provide a full comprehension of this dynamic technological convergence. Both UASs and the IoT are distinct disruptive technologies, each with unique capabilities and applications. However, when combined, they create a synergistic ecosystem with unprecedented opportunities for data collection, real-time analytics, and autonomous operations. The chapter begins by delineating the core components and functionalities of UASs and IoT individually before discussing how UASs can serve as dynamic, mobile



Recognized as a Technical Program Committee Member for the prestigious International Conference on Green Energy, Computing, and Intelligent Technology (GEN-CiTY 2024), organized by the University of Southampton Malaysia. The conference, held from December 11 to 13, 2024, focused on advancements in green energy and intelligent technologies. This acknowledgment highlights Dr. Iyer's significant contributions to the academic and technical community in this innovative field.



Invited as a distinguished speaker on the occasion of National Energy Conservation Day, celebrated on December 14, 2024. The event focused on promoting awareness and innovative approaches to energy conservation and sustainable practices. This recognition underscores Dr. Iyer's expertise and his valuable contributions to the academic and professional community in advancing sustainable energy solutions.

Honored with a Certificate of Appreciation for serving as a Session Chair at the Sixth International Conference on Soft Computing and its Engineering Applications (icSoftComp2024). The conference, organized by Charotar University of Science and Technology (CHARUSAT), was held in Bangkok, Thailand, from December 10 to 12, 2024. This recognition highlights his valuable contribution to advancing discussions in the field of soft computing.





Ms. Poonam Chakravarty

Qualification: M.E. (IT), Ph.D. Pursuing (IoT)
 Assistant Professor & Head
 Department of CSE/IT,
 Rai School of Engineering,
 Rai University.

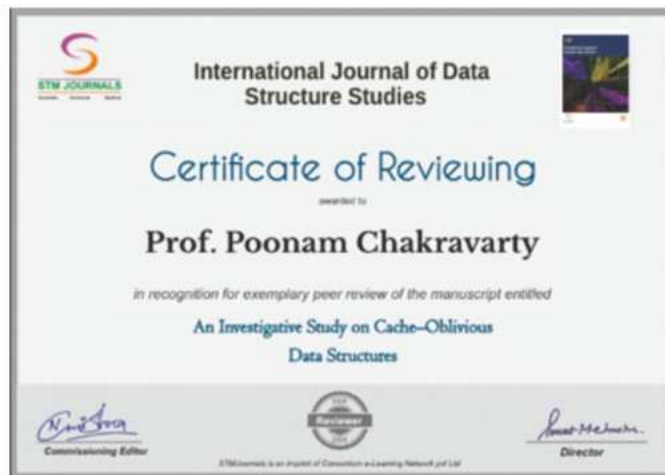


Ms. Poonam Chakravarty Assistant Professors, Rai School of Engineering, Rai University, Ahmedabad, successfully completed Faculty development program on effective manuscript drafting and publication in peer reviewed international journal (FDP-MDP_ organized by Endoxia Research University, ERU-USA, Endoxia Research Centre, ERC- India & European International Research Council of Endoxia from 26th August to 6th September 2024



Successfully completed faculty development program on qualitative and quantitative research design in higher education organized by Endoxia Research University from 12th September to 21st September 2024.

Awarded a certificate of reviewing by “Journal of Advances in Shell Programming” - STM journals, in recognition for exemplary peer review of the manuscript titled “Blockchain Adoption in Indian Public Services: A Holistic Empirical Investigation”.



Awarded a certificate of reviewing by “International Journal of Data Structure Studies” - STM journals, in recognition for exemplary peer review of the manuscript titled “An Investigative Study on Cache - Oblivious Data Structures”.

Awarded a certificate of reviewing by “Journal of Image Processing & Pattern Recognition Progress” - STM journals, in recognition for exemplary peer review of the manuscript titled “A Comparative Analysis of Machine Learning Techniques for Fruit Defect Detection System”.





Published the manuscript titled Impact of Time Complexity Using Array and Linked list in Data Structure in International Journal of Data Structure studies Volume 2, Issue 2, Year: 2024.



Successfully published her research paper titled "Cancer Detection Using Machine Learning" in the prestigious International Journal for Research in Applied Science & Engineering Technology (IJRASET). The paper, identified by ID: IJRASET66139, has been published in Volume 12, Issue XII, December 2024, after undergoing a thorough peer-review process. This achievement

highlights her dedication to advancing research in the field of medical technology and machine learning. Congratulations on this significant accomplishment!

Received a Certificate of Participation for successfully attending the International Conference on Transformative Innovations in Science, Technology, Nursing, and Medical Sciences (NextGen Tech 2024). The event was organized by Eudoxia Research University, USA, and Eudoxia Research Centre, India, on 27th and 28th December 2024.



Mr. Jigar Pandya

Qualification: MCA, Ph.D. Pursuing (IoT)
 Assistant Professor & Head
 Department of CSA,
 Rai School of Engineering,
 Rai University.



Mr. Jigar Pandya, Assistant Professor, Rai School of Engineering, Rai University, Ahmedabad, was awarded a certificate of reviewing by Journal of communication Engineering & Systems in recognition for exemplary peer review of the manuscript titled “Research on understanding of Environmental and Cultural Factors Affecting Online Purchase Behavior”.



Awarded a certificate of reviewing by Journal of Image processing & pattern recognition process in recognition for exemplary peer review of the manuscript titled “A comparative analysis of machine learning techniques for fruit defect detection techniques”.

Awarded a certificate of reviewing by Journal of Advances in Shell Programming in recognition for exemplary peer review of the manuscript titled “Exploring the role of Advanced Shell Scripts for the Malware Threat Detection”.



Awarded a certificate of reviewing by Current Trends in Information Technology in recognition for exemplary peer review of the manuscript titled “Integrating Deep Learning and Computer Vision for Recognizing American Sign Language”.



Invited as Guest of Honour in Annual Function of Podar International School, Bhavnagar on 24th December 2024.



Publication of titled Impact of Time Complexity Using Array and Linked list in Data Structure in International Journal of Data Structure studies Volume 2, Issue 2, Year: 2024.

Achieved a remarkable milestone by publishing his research paper titled "Cancer Detection Using Machine Learning" in the prestigious International Journal for Research in Applied Science & Engineering Technology (IJRASET). The paper, identified with ID: IJRASET66139, has been rigorously reviewed and successfully accepted for publication in Volume 12, Issue XII, December 2024. This recognition highlights his dedication to advancing research in the field of machine learning applications in healthcare. Congratulations to Mr. Jigar Pandya for this significant academic accomplishment!



Successful publication of his research paper titled "An Analysis of Seasonal Trend Variation in Rainfall and Temperature Pattern in Ahmedabad Region of Gujarat, India". The paper, identified by ID: IJRASET65005, was rigorously reviewed and deemed suitable for publication in the International Journal for Research in Applied Science & Engineering Technology (IJRASET). It appears in Volume 12,

Issue XI, November 2024. This publication underscores his dedication to climate and environmental research, contributing valuable insights into seasonal trends in Gujarat. Congratulations on this commendable achievement!

Dr. Irfan Ahmad Khan

Assistant Professor,
 Department of Computer Science and Applications,
 Rai School of Engineering,
 Rai University.



Dr. Irfan Ahmad Khan has successfully completed the Introduction to Data Science course offered by Cisco Networking Academy. This certification acknowledges his proficiency in understanding the promises and challenges of data analytics, the role of data in AI and Machine Learning, and various career opportunities in data analytics. His achievement reflects a strong foundation in data-driven decision-making and a commitment to advancing his expertise in the evolving field of data science.





Mr. Meet Bakotia

Assistant Professor,
Department of Mechanical Engineering,
Rai School of Engineering,
Rai University.



Mr. Meet Bakotia, Assistant Professor in Mechanical Engineering, Rai University, participated in Faculty Development Program/Training Program on NAAC - New Reforms - 2024, An Introduction to Binary Accreditation Framework, New Education Policy 2020 from 18-19 October 2024 jointly organized by Research foundation of India, SHODH Malwa, Eklavya University.



Successfully appeared and cleared PSAT (Planet Spark Aptitude Test Certification) in recognition of outstanding performance in Child Pedagogy, English Language, Logical Reasoning and English Grammar. Planet Spark is an edtech platform where candidates can learn, grow, and develop essential skills through interactive and engaging educational content, empowering them for a brighter future.



Mr. Sagar Vakhare

Assistant Professor,
Rai School of Engineering,
Rai University.



Mr. Ashutosh Pandey

Assistant Professor,
Rai School of Engineering,
Rai University.



Mr. Sachin Thakur

Assistant Professor,
Rai School of Engineering,
Rai University.



Mr. Aditya Yadav

Assistant Professor,
Rai School of Engineering,
Rai University.



Mr. Amarjeet Kannaujiya

Assistant Professor,
Rai School of Engineering,
Rai University.

Mr. Sagar Vakhare, Mr. Ashutosh Pandey, Mr. Sachin Thakur and Mr. Aditya Yadav, Assistant Professors, Rai School of Engineering, Rai University, Ahmedabad, Published a paper titled on “Rainfall Trend variations over Ahmedabad Region of Gujarat” in International Journal of Creative research thoughts (IJCRT), an International open access Peer reviewed refereed journal, Volume 12, issue 11, ISSN 2320-2882.

www.ijcrt.org © 2024 IJCRT | Volume 12, Issue 11 November 2024 | ISSN: 2320-2882
IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)
An International Open Access, Peer-reviewed, Refereed Journal

Rainfall Trend Variations Over Ahmedabad Region Of Gujrat

Sagar S. Vakhare¹, Ashutosh Pandey², Sachin Thakur³, Aditya Yadav⁴
Assistant Professor^{1,2,3,4}
School of Engineering, Rai University Ahmedabad

Abstract- The rainfall trend analysis study helps to assess the monsoon pattern of the Ahmedabad region so as to predict chances of occurrence of drought and flood. This study aims to analyse the rainfall trend in Ahmedabad of Gujarat state in India. Forty-one years (1981-2022) of monthly rainfall data has been analysed using Mann-Kendall test and Sen's slope estimation methods. In Mann-Kendall test, the test statistics (Zc) for January, March, June, July, August, September, October, November and December shows a rising trend while Zc values corresponding to the months February, April, and May are showing negative trend during the study period.

Keywords- Trend analysis, Mann-Kendall test, Sen's Slope factor

1 INTRODUCTION

The Earth's climate has changed over the past century in terms of precipitation and temperature fluctuations. The biggest effect of climate change is changing precipitation. Changes in precipitation due to global warming will affect the hydrological cycle and stream flow structure and demands (especially in agriculture), which requires hydrological planning and management practices. Urbanization also causes climate change when land use changes due to agricultural and irrigation practices [1]. Changes in runoff and its distribution depend on likely future scenarios [2]. Since stream flow and precipitation are closely related, any modifications to precipitation patterns will affect it. The amount of water that is available to satisfy various demands, such as for agricultural, industrial, domestic water supply, and hydroelectric power generation, is significantly influenced by the amount of rainfall that an area receives. The agricultural production in many areas of the country is directly impacted by the South West monsoon's variations, which has an impact on the entire economy. Numerous studies have demonstrated that during the monsoon season, there is a lot of rain, whereas during the off-monsoon season, there is less rain. Floods are caused by excessive rain, and other seasons show a lack of water to meet needs, particularly those related to irrigation. The recent flooding in Kerala, particularly in the Vamanapuram River, put many lives and the surrounding agricultural area at danger. Numerous scientists investigated the national rainfall trend in various regions. In Himachal Pradesh, an investigation of rainfall trends from 1901 to 1994 at 11 sites found an increasing tendency in annual rainfall at 8 stations [4]. In their study of the relationship between the El Nino Southern Oscillation (ENSO) and monsoon rainfall across India, Kothawale et al. [5] found a significant correlation between El Nino episodes and insufficient monsoon rainfall. Annual severe rainfall over Kerala showed declining trends, especially for stations in mountainous terrain. [6].

In light of the problems mentioned earlier, the current study was conducted in an effort to determine the rainfall trend, the most significant climatic variable. For the selected 41 years (1981-2022) of the study, trend analysis of rainfall data from Ahmedabad region is utilized.



Mr. Sagar Vakhare, Mr. Aditya Yadav, Mr. Amarjeet Kannaujiya, Mr. Ashutosh Pandey Assistant Professors, Rai School of Engineering, Rai University, Ahmedabad, published a paper titled “A Framework for Sentiment Analysis of Online News Articles” in International Journal for Research in Applied Science & Engineering Technology (IJRASET), ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538, Volume 12 Issue XI Nov 2024



International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue XI Nov 2024. Available at www.ijraset.com

A Framework for Sentiment Analysis of Online News Articles

Sagar Vakhare¹, Aditya Yadav², Amarjeet Kannaujiya³, Ashutosh Pandey⁴
^{1,2,3,4}Assistant Professor, Rai School of Engineering, Rai University, Ahmedabad

Abstract: In many regions, the traditional way of life has altered as a result of the current innovation era. The vast amount of data that is being constantly and continuously disseminated by a large number of users via online journals, reviews, comments, news blogs, messaging websites, social media, and other platforms has transformed into information technology. Owing to the sheer volume of production of valuable web assets, sentiment analysis is a major focus of the research. The process of identifying and classifying abstract data from content using text analysis and natural language processing techniques is known as opinion analysis. News analysis can be used to map a company's behavior over time and provide important, useful information about competitors. In order to characterize the general inclination or state of mind of customers as reflected in online life around a specific brand or organization and determine whether they are positively or negatively, sentiment analysis is also useful in web-based life checking. For some users these days, reading the news online is a daily exercise. People's opinions will generally change depending on the news they experience. News reports on events involving emotions, whether positive, negative, or neutral. Sentiment analysis is a useful tool for studying the human feelings present in actual data. There are numerous difficulties in locating the sentiment news articles.
Keywords: Natural Language Processing, News Analysis, Opinion Mining, Sentiment Analysis, Text Classification, Text Mining.

1. INTRODUCTION

The public sphere, everyday life, and choices of common people have undergone remarkable transformations since the advent of the internet. Expressions such as articles, videos and websites subsume them for movies, products, and books. These days before actually spending money on them, it affects a person's public behavior in the sense that it has shaped their way of life. The very same web-based world is presented—for example, through videos, news channels, message boards, and news articles—to affecting people's public behavior and how they give or differ things in their environment. People will generally experience a shift in opinion depending on the news they read. The web's openness gives less news than the news on the web. There is constantly an enormous amount of information available on the web (clear-driven web). Customers are not just users but are also co-creators of content on the internet. The client is directly engaging their web presence by adding blog entries, news, audio, photographs, videos, and articles. With this sphere, a large portion of the content on the internet is now user-generated. Access to popular communication platforms has made it possible for people to form opinions, judgments, recommendations, assessments, and frames of mind about a variety of subjects, including objects, events, problems, relationships, individuals, services, and their attitudes. These days, such data has a huge capacity. We derive this data as a part of our daily lives through the use of Online Social Networks (OSNs) to facilitate better learning and coordination within our global community. Owing to the daily influence of these networks, we begin to replace our meaningful decisions and actions with particular suggestions already in place from other people's minds. Because of this, if a concerning and challenging video presents to these kinds of OSNs, dull personalities. Emotive analysis can lead to reasonable expectations. It assumes the value of sentiment analysis, a tool designed to distinguish opinions, and offers an alternative to text mining. The rapid development of the web, portable technology, and the internet has allowed more people read the news. Physical newspapers and traditional magazines have been replaced by online news sources and websites. The two factors that are driving readers' interest in shifting to online news are progressiveness and curiosity, according to [1]. These days, people must continue to search news as they can find the various sources regarding topics that interest them or are important to them. Intelligence refers to the search technology that users employ, which leads them to spend more on their searches. Quickness is a factor that makes people more interested with getting the news quickly these days [2]. Because of the internet, we enjoy allowing people to benefit by providing them with all the information they require on a daily basis. Online news sources have developed strong strategies to attract readers' attention [3]. Online news websites express their attitudes about news items, which can include people, places, or even objects, which also bring about recent events [4].

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Mr. Sagar Vakhare
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Mr. Arpit Chopra
Assistant Professor,
Rai School of Engineering,
Rai University.



Mr. Jigar Pandya
Assistant Professor & Head - CSA
Rai School of Engineering,
Rai University.



Prof. (Dr.) Sailesh Iyer
Professor & Dean
Rai School of Engineering,
Rai University.

Mr. Sagar Vakhare, Mr. Arpit Chopra, Mr. Jigar Pandya, Prof. (Dr.) Sailesh Iyer, Rai School of Engineering, Rai University, Ahmedabad have published combined paper titled: “An Analysis of Seasonal Trend variation in Rainfall and Temperature pattern in Ahmedabad region of Gujarat India” in International Journal of Research in Applied Science & Engineering Technology, a peer reviewed journal for research and applied science and engineering technology.



International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue XI Nov 2024. Available at www.ijraset.com

An Analysis of Seasonal Trend Variation in Rainfall and Temperature Pattern in Ahmedabad Region of Gujarat, India

Sagar S. Vakhare¹, Arpit Chopra², Jigar Pandya³, Prof.(Dr.) Sailesh Iyer⁴
^{1,2,3,4}Assistant Professor, ³Professor, School of Engineering, Rai University Ahmedabad

Abstract: The annual maximum and minimum temperatures, as well as precipitation data in the Ahmedabad region of Gujarat State, were analyzed in this study using data obtained from the official NASA website. The objective was to identify the variations in maximum and minimum temperatures and rainfall from the year 1981 to 2022. Statistical methods, including linear regression, were employed to demonstrate the trends in maximum and minimum temperature changes and rainfall over time. As a result, the study suggests promoting preventive measures, such as providing accurate weather and climate data for planning, to mitigate these impacts, particularly for communities reliant on temperature-sensitive agriculture.
Keywords: Climate changes, Linear regression, Trend analysis.



Ms. Megha Sankhala

Assistant Professor,
Rai School of Engineering,
Rai University.



Ms. Megha Sankhala, Assistant Professor at Rai University, has successfully completed the AICTE ATAL Faculty Development Program on "Empowerment of Robots, AI/ML, and Additive Manufacturing in Industry 4.0," held from 2nd to 7th December 2024 at Nalanda Institute of Technology. This achievement reflects her dedication to enhancing her expertise in emerging technologies.




Successfully completed the AICTE Training and Learning (ATAL) Faculty Development Program on "Advanced Computing Redefined: Exploring AI, Quantum Computing, and Cyber Security Synergies." This program was conducted at Shreeyash Pratishthan's Shreeyash College of Engineering & Technology from November 25 to November 30, 2024. This achievement highlights her dedication to advancing her knowledge in cutting-edge technologies and enhancing her academic expertise.



STUDENTS ACHIEVEMENTS

Congratulations, Shital Bavaliya!

We are thrilled to celebrate your incredible achievement of monetizing your YouTube channel as an interior designer! Your dedication, creativity, and hard work have truly paid off, and this milestone is a testament to your talent and entrepreneurial spirit. As a B.Sc. IT 5th semester student, balancing academics with such a remarkable accomplishment is no small feat. You have set an inspiring example for your peers, and we couldn't be prouder of you. Keep shining and reaching new heights in your journey as a content creator and interior designer. The future is bright, and this is just the beginning!



SHITAL BAVALIYA


Interior Designer


Branch :- B.sc It - 5 Rai University

About My Personal Experience For Monetize My YouTube Channel

Monetizing a YouTube channel is a dream for many creators, and I'm excited to share how I achieved it. With the right strategy and consistent effort, turning your passion into a source of income is possible. I successfully monetized my channel, and here's how I did it.

My Channel Name :-

 **Shreeji Design Hub**

 **shitalbavaliya3804@gmail.com**

• **My Journey to Monetization**

I've always know about Autocad, Revit , 3ds Max, Photoshop, Enscape and other Modelling softwares so I choose to create stunning interior design concepts. Realizing the potential of sharing this knowledge i started my YouTube channel on long video to help others learn design skill software tips, and creative techniques. My early content included: Tutorials on Autocad Revit and 3ds Max for beginners. Interior design tips and tricks , vastu shastra tips. I had to focus on creating high-quality content, staying consistent with my uploads, and engaging with my viewers.

To monetize my channel, I had to meet YouTube's Partner Program requirements: 1,000 subscribers. 4,000 watch hours in the past 12 months or 10 million Shorts views in 90 days. I focused on these strategies to grow my channel: Quality Content, eye-catching thumbnails, attractive titles and descriptions, shared my videos on platforms like Instagram and LinkedIn.

Then Finally 1,000 subscriber and 4000 watch time criteria are completed. So I applied for the YouTube Partner Program (YPP):

1. Agreed to the YPP terms. 2. Set up my Google AdSense account. 3. Received approval after a one day(I am shocked because YPP approval receive atleast 1 month & in my channel received in just 1 day). And finally my channel monetize (**YouTube's partner program**)

Tips for Aspiring Creators :

Focus on a topic , Regular uploads keep your audience engaged , Build a community by interacting with your audience through comments and live sessions. By sharing my interior design expertise, I turned my channel into a profitable venture. If you have skills or knowledge, start your journey today—it's worth it!

Thank you for being part of this remarkable journey.



"Congratulations to our bright and talented students, **Abhishek Yadav, Kumar Anupam, and Kartikey Pandey**, for their outstanding participation in the prestigious I Love Hackathon held in Pune. Their enthusiasm, innovative ideas, and dedication to solving real-world challenges showcased their potential and brought immense pride to our institution. Keep inspiring us with your achievements and pushing the boundaries of innovation!"



Congratulations to the Winners of the Article Competition!

We are thrilled to celebrate the outstanding achievement of our talented students who showcased their creativity and intellectual brilliance in the recent Article Competition. Your dedication, unique perspectives, and ability to articulate ideas have truly set you apart. Your success reflects not only your hard work but also your passion for excellence in writing. We are incredibly proud of your accomplishment and look forward to seeing your continued growth and contributions. Keep inspiring and achieving great heights!

Winner: Rajput Ashutosh ,B.Tech 6th (CSE)

**By Rajput Ashutosh
B-Tech(CSE)**

HACKERS ARE ALWAYS EVOLVING , SO MUST WE



“DIGITAL WARRIORS: INSIDE THE HACKERS’ ARMY OPERATIONS”

In September 2024, Israeli intelligence secretly compromised Hezbollah communications equipment including pagers and walkie-talkies in Operation Grim Beeper Deaths, more than 4000 injuries The attack marked a turning point in cyber warfare, somewhere weaponized digital vulnerabilities in the physical world

The Israeli intelligence agency, Mossad, planted explosives in the devices, causing several casualties. Hezbollah had switched to pagers in early 2024, unaware they had been installed. The first blast killed 12 people, including civilians, and wounded nearly 3,000. The second wave targeted walkie-talkies, killing 30 people and injuring more than 750 others.

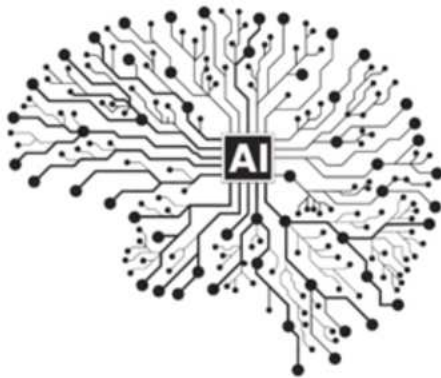
The event highlights the critical importance of cybersecurity in today's world. As attacks increasingly blend digital and physical, public visibility is increasingly important. Citizens need to be aware of the risks posed by insecure technologies, especially in critical infrastructure, and the need for strong cybersecurity measures. Governments and organizations must prioritize cyber resilience to protect against this growing threat. In this new era of warfare, the security of communications equipment and digital systems is not only a military but a global need.

1st Runner Up: Aryan Singh Rajput ,B.Tech 6th (CSE)

Generative Ai

BY - ARYAN SINGH RAJPUT | BRANCH - B.TECH(CSE) | UID - U164192022F203004

AI BOON OR DOOM GENERATIVE AI IN THIS GEN



GENERATIVE AI A BOON

As **generative ai** have adverse effects in this world it does have some good effects.

Generative AI offers a wealth of opportunities to -

Chatbot and Virtual Assistance.

Conversational Analytics.

Code generation and personalization.

According to TOI , Reports estimate that the market of AI in India, which stood at \$4 billion in 2023 and till 2030 it will reach up to \$18 billion.

GENERATIVE AI A DOOM

As we ca the rapid growth of **generative ai**. there are some adverse effects too, for example:
Miss Information and Deepfake videos.

Job displacement.

Bais and Discrimination.
and some security Risks.

According to a McAfee survey, **70 percent** of people said they aren't confident that they can tell the difference between a **real** and **cloned voice**.

In 2024, a deepfake of British engineering firm **Arup's "CFO"** led to the transfer of **\$25 million** to bank accounts in **Hong Kong**.

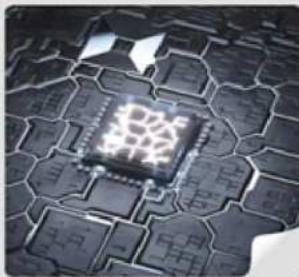


2nd Runner Up: Kishan Mevada, B.Sc IT 6th



Kishan Mevada
(Bsc.it 6th)

HYPER AUTOMATION



The Transformative Power of Hyper-Automation

Hyper-Automation is reshaping the landscape of business operations and efficiency, marking a significant leap forward in the field of automation. By integrating advanced technologies, it offers an unparalleled opportunity to streamline processes, enhance productivity, and drive innovation.

What is Hyper-Automation?
Hyper-Automation refers to the use of advanced technologies, such as Artificial Intelligence (AI), Machine Learning (ML), Robotic Process Automation (RPA), and others, to automate complex business processes end-to-end. Unlike traditional automation, which focuses on automating specific tasks, Hyper-Automation aims to create a seamless and comprehensive automation ecosystem.



Key Components of Hyper-Automation

- **Artificial Intelligence (AI):** AI is used to simulate human intelligence and make decisions based on data analysis. It enables machines to learn from experience and improve their performance over time.
- **Machine Learning (ML):** ML algorithms analyze large datasets to identify patterns and make predictions. This helps in automating tasks that require cognitive abilities, such as data analysis and decision-making.



Benefits of Hyper-Automation

- **Increased Efficiency:** By automating repetitive and time-consuming tasks, organizations can significantly improve their operational efficiency and productivity.
- **Cost Savings:** Hyper-Automation reduces the need for manual labor, leading to cost savings in terms of labor and operational expenses.
- **Enhanced Accuracy:** Automated processes minimize the risk of human errors, ensuring higher accuracy and reliability in operations.
- **Scalability:** Hyper-Automation solutions can easily scale to accommodate growing business needs, allowing organizations to adapt to changing demands.

3rd Runner Up: Vansh Chauhan, BCA 2nd



Name- Vansh Chauhan
Branch- B.C.A
Topic- Hyper Automation

HYPER AUTOMATION THE NEXT FRONTIER

About Hyper Automation

Hyper Automation refers to a combination of complementary sets of tools that can integrate functional and process silos to automate and augment business processes. Hyper Automation brings together several components of process automation, integrating tools and technologies that amplify the overall ability to automate business processes



More About Hyper Automation

It starts with RPA at its core, and expands the automation horizon with AI, process mining, analytics, and other advanced tools. The integration of these multiple technologies enables end-to-end process redesign, automation, and monitoring, delivering much greater value and impact. Hyper automation provides several benefits over other automation technologies. These include automating processes at a quicker rate; using advanced analytics; offering increased employee satisfaction and motivation; assigning a workforce for value-added tasks; sharing accurate insights; ensuring enhanced compliance and reduced risk; and enables some of points are mentioned beside.

Hyper automation does not just refer to implementing tools to manage tasks. It also requires collaboration amongst humans who are decision-makers, and can use technology to interpret data and apply logic. For example, imagine a case of social media and customer retention. A business can rely on tools that use RPA and ML to produce reports and pull data from social platforms to understand customer sentiment. Reports will be generated, and information will be readily available for the marketing team. However, it will then require the marketing team to use these insights, and consider what types of campaigns, promotions, and incentives should be incorporated into a business plan to hold onto satisfied customers and address the concerns of those who feel dissatisfied. Some main points are mentioned below.

- 01 Workforce enablement - Harnessed with the power of hyper automation solutions, employees can automate many processes within their roles and get more done faster with the resources available to them. Minimizing manual tasks enables them to focus more on impactful work, such as planning and strategy.
- 02 Digital agility - When every form of automation works closely together, a company can move past the one off benefits of a single technology to a state of true digital agility and flexibility at scale.
- 03 Systems integration - With hyper automation, a company's clunky on-prime technology and disparate data systems can communicate seamlessly

4th Runner Up: Ronak Malam, B.Tech 2nd (CSE)

Name :- Ronak Malam
 Course :- RSE - Btech(CSE)
 - AI/ML Semester - 2

Rai University

Issue 24 December 2024

GENERATIVE AI

SHAPING THE FUTURE OF CREATIVITY AND TECHNOLOGY



What is Generative AI?

Generative AI refers to artificial intelligence systems that can create new content, ideas, or solutions based on training data. In contrast to traditional AI models that focus on analyzing or categorizing information, generative models produce entirely new outputs. Technologies like GPT (Generative Pre-trained Transformer), DALL-E, and GANs (Generative Adversarial Networks) are prime examples.

Key Applications Of The Generative AI

Content Generation
 With generative AI tools, one can write articles, create scripts, or even visual art, so the scope for writers, designers, and marketers is endless.

Health Innovations : AI models generate synthetic data for medical research, design new drugs, and even personalize treatment plans for patients.

Gaming and Entertainment : Game developers use AI to create lifelike characters, generate immersive storylines, and produce procedural landscapes.

Education and Training : Generative AI creates personalized learning experiences, generating tutorials, tests, and even simulated scenarios for training professionals.

Product Design and Prototyping : AI helps engineers and designers explore innovative solutions by generating design prototypes and testing them virtually.

Benefits and Challenges

Benefits and Challenges

Benefits:

- It accelerates creative processes.
- Reduces production cost.
- Fosters innovation through the exploration of alternative solutions.

Challenges:

- Ethical issues in the form of deepfakes and copyright issues
- Quality training data dependency
- Possibility of misuse in areas such as misinformation.

Future of Generative AI

The increasing power of technology will make Generative AI more and more indispensable to many industries. Multi-modal AI models will change the way we communicate with technology, as these models can process and generate diverse forms of data. Generative AI will be used in solving global challenges as well as in enhancing human creativity. This is, indeed, a future-creating technology rather than a prediction-making one.

Congratulations Gaurav Bhardwaj!

On behalf of Rai School of Engineering, we extend our warmest congratulations to you on receiving your First Aid and CPR certification. Your dedication and hard work in acquiring these essential life-saving skills have truly paid off. This certification, awarded by the respected Dy. S.P. A.A. Shaikh (CDTS Commandant), is a testament to your commitment to becoming a responsible and capable individual in emergency situations. We are proud of your achievement and are confident that the knowledge you've gained will help you make a positive impact when it matters most. Keep up the excellent work, and continue to excel in all your future endeavors!





"Unlock the power of your mind: Learn to mentor, communicate to plan, organize to adapt, fuel creativity through collaboration, and trust your intuition to inspire ground-breaking ideas."



**RSE CONNECT DIGITAL NEWSLETTER COMMITTEE (2023-24)**

Name	Designation	Position
Prof. (Dr.) Sailesh Iyer	Dean, RSE	Chief Editor
Dr. Radhikaben Mistry	Assistant Professor	Assistant Editor
Ms. Megha Sankhala	Assistant Professor	Assistant Editor
Mr. Meet Bakotia	Assistant Professor	Assistant Editor
Ms. Poonam Chakravarty	HOD (CSE/IT), RSE	Member
Mr. Jigar Pandya	HOD (CSA), RSE	Member
Mr. Kamlesh Patel	HOD (Mechanical), RSE	Member

Newsletter Feedback Form :

We'd love to hear your thoughts on this edition of our newsletter. Please fill out the feedback form below.



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