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DEPARTMENT OF INFORMATION TECHNOLOGY
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ABESIT



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DEPARTMENT OF INFORMATION TECHNOLOGY

TABLE OF CONTENTS

S. No.	Inside This Issue	Page No.
1.	Message from HOD's Desk	3
2.	Vision and Mission of Department	4
3.	Bit Brain club Activities	5
4.	IT Technical Club Activities	6-7
5.	Workshops	8
6.	Faculty Development Program	9
7.	Faculty Achievements	10-12
8.	Student Achievement	13-14
9.	Article1: Data Driven World	15
10.	Article2: Smart clothes/technical fashion as a future wave?	16

MESSAGE FROM HOD's DESK

**DR. BIPIN KUMAR RAI
PROFESSOR AND HEAD OF DEPARTMENT,IT**



I am happy to congratulate the team that has taken the initiative for this Department Magazine for the academic year 2021-22. This Magazine acts as a platform for students and faculty to share the latest Technical knowledge and cultivate right ways that will equip all of us to stay competent in our respective fields of study and research. I congratulate and thank the Faculty coordinator Prof. Shivani Sharma for her untiring efforts to publish this Magazine. I hope that everyone would continue to give their full efforts to keep the momentum.

EDITORIAL BOARD

FACULTY CO-ORDINATOR

***Ms. Shivani Sharma
Assistant Professor, IT***

STUDENT CO-ORDINATORS

Aparna Jha	3rd Year, IT
Khushi Sharma	3rd Year, IT
Sneha Gupta	2nd Year, CSE-DS

VISION AND MISSION OF DEPARTMENT

INTRODUCTION TO INFORMATION TECHNOLOGY DEPARTMENT

The Department offers Bachelor of Technology programme in Information Technology. The faculty and staff members of the Department are well qualified and efficient in guiding the students in every field of the Information Technology. The area of Information Technology aims at design, implementation and management of computer-based information systems. These automated information systems are capable of storing, transmitting, and retrieving of all types of complex data. The Department develops IT Graduates having good problem solving capabilities, communication skills and habit to learn new technologies. Apart from prescribed university curriculum, focus is on practical and skill-based training to ensure that students grow according to changing market scenario.



To become a front runner in transforming the individuals into competent IT professionals, to meet the needs of evolving technology and serve humanity.

- To impart quality education with the innovative teaching-learning process to develop a culture of research and innovation.
- Collaborate and interact with industry professionals, academicians to provide suitable forums to exhibit the creative talent of students.
- Provide leadership and planning for effective and strategic use of Information Technology.



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BIT BRAIN CLUB ACTIVITIES

QUIZ THE IT WORLD



Winners of Quiz The IT World, held on 20th October.

1st position- Ekansh Kumar(2nd-year DS-DS)

2nd position-Keshav Agarwal (2nd-year CS-AI)

3rd position-Vikas Yadav(2nd year IT)

Congratulations to all the winners and cheers to all those who participated with equal enthusiasm. We wish you all the luck in future.



In this Quiz event, we have received 100+ Registrations for the first round from All years. A total of 13 Students has been qualified for Second Round.

AZURE DAY



ABESIT BIT-BRAIN CLUB organised "AZURE DAY". From Azure community our speakers were (Sanjaya kumar Verma, Sarthak Jain, Dibyasom Puhan) who gave insight about Azure and ML development to our participants . 44 participants were present in the event. A successful completion of the event with full of enjoyment and acknowledgement regarding Microsoft Azure Day. ABESIT Ghaziabad BIT BRAIN CLUB

IT TECHNICAL CLUB ACTIVITIES

C PROGRAMMING QUIZ CONTEST

IT Technical Club organized a "C programming Quiz Contest" for IT 2nd year students on 5th September 2021. We are glad with the positive results, and participation. Therefore, we successfully conducted the event and finalize the following winners of the event.

- 1st Sushant Yadav
- 2nd Sanskar Gupta
- 3rd Mohit Kumar



We congratulate our winners for this achievement by providing them certificates and cash prize. Deep learning for computer vision IT Department Organized an Expert Talk on "Deep learning for computer vision" on 21/10/2021 from 11:00 am to 1:00 pm. Students from 3rd year IT attended the expert talk. The speaker for the session was Mr. Ravikant Tyagi, CEO-Brain Mentors Pvt Ltd. The Expert talk gave insights into challenging computer vision problems such as image classification and object detection. The session was interactive and the students learned how Deep learning can be used to solve complex and challenging problems. Organizers: Vedant Dubey, Tanisha, Taniya Goel, Radhika Piplani.

WORKSHOP ON 'DATA STRUCTURES'

The IT technical club of IT department organised a workshop on 1st December for second-year students on " Data structures" from 11:30 am to 01:10 pm. The workshop was coordinated by Dr Bipin Kumar Rai, HOD(IT). The speaker for the workshop was Miss. Mosina Ashraf from CodingBlocks. The resource person gave hands on knowledge about the importance of data structure in Coding rounds of interviews and how to kickstart their journey towards Data Structure. The students were mentored on their coding knowledge. The session was interactive with various coding riddles and questions from basic understanding of languages . The winners were rewarded with various prizes. The event was conducted successfully and the students were enthusiastic throughout the workshop.



IT TECHNICAL CLUB ACTIVITIES

DEEP LEARNING FOR COMPUTER VISION



IT Department Organized an Expert Talk on “Deep learning for computer vision” on 21/10/2021 from 11:00 am to 1:00 pm. Students from 3rd year IT attended the expert talk. The speaker for the session was Mr. Ravikant Tyagi, CEO-Brain Mentors Pvt Ltd. The Expert talk gave insights into challenging computer vision problems such as image classification and object detection. The session was interactive and the students learned how Deep learning can be used to solve complex and challenging problems.

TERROR OF ERROR

IT Technical Club organized the event “Terror Of Error” for CSE, CSE(AI), CSE (DS), CSE(IOT), IT branches of 1st and 2nd Year , including 3rd Year. Date: 13th May, Friday Time: 03:00 PM - 05:00 PM Organizers: Sajal Garg , Aparna Jha , Ayush Kumar , Vikas Yadav , Khushi Sharma , Priyansh Daksha, Abhay Saxena, Harshita Phulwani. The event gave a good chance to the participants for advancement in their Coding skills and challenging their knowledge in it. The event was conducted in two rounds.

ROUND 1: Debugging round

ROUND 2: Blind Coding

Winners for this event were: 1. Bhumit Gupta (CSE(IOT)

2nd Year)

2. Ravi Chauhan (CSE 3rd Year)

3. Aman Gupta (CSE 2nd Year)

IT Technical Club congratulates the winners for this feat. Winners are awarded with prize money.



The event gave an adrenaline rush to the coder's with their actively participation and made this event a huge success with cognizance and a fun Techy day for all. Consequently, we have successfully achieved the goal of our event.

WORKSHOPS

REAL LIFE PROJECTS USING EMERGING TECHNOLOGIES



IT Department Organized an Expert Talk on "Real Life Projects using Emerging Technologies" on 19/10/21 from 3:00 pm to 4:30 pm. Total 55 students from 3rd year IT attended the expert talk. The expert talk was conducted in online mode and it was coordinated by Ms. Shivani Sharma, Assistant Professor, IT Department. The Expert talk focused on identifying and formulation of solution for real life projects using emerging technology. The resource person gave a clear insight on basic understanding of frontend and backend of a website. He also demonstrated on designing a simple web app. The students gained knowledge and were highly motivated as the resource person Mr. Ashish Shukla, Python Software Engineer at Ciena and is also the Alumni of this college.

RUSH THE CODE



The event gave an good chance to participants for advancement in their Coding skills. The event gave an adrenaline rush to the coder's with their actively participation and made this event a huge success with cognizance and a fun Techy day for all. Consequently, we have successfully achieved the goal of our event and the *Winners* for this event are 1. Ratan Deep Singh (CS 2nd Year), 2. Ravi Chauhan (CS 3rd Year), 3. Sachin Gupta (CS 2nd Year) IT Technical Club congratulates the winners for this feat. Winners are awarded with prize money. --> Also Congratulations to those who had participated and had make an effort endeavor to completed their task successfully. Congratulations to all.

MACHINE LEARNING APPLICATIONS FOR DATA ANALYTICS



IT Department Organized a Expert Talk on "Machine learning applications for Data Analytics " on 27/04/2022 from 11:00 am to 12:00 pm. Students from 3rd year IT attended the expert talk. The speaker for the session was Mr. Ravikant Tyagi ,CEO Brain Mentors Pvt. Ltd. The Expert talk gave insights into challenging problems where Machine learning algorithms can be used to solve complex problems. The resource person gave hands on experience on case studies like Gender Detection and Fake data generation using GAN. The session was interactive and the students were motivated to learn Deep learning, Data Analysis etc.

FACULTY DEVELOPMENT PROGRAM

Dr. Bipin Kumar Rai	1 Week	Data Science using Python	09th to 13th August 2021	Computer Science and Engineering Department NITTR Chandigarh, Ministry of Human Resource Development, Government of India
Dr. Kaushal Kishor	1 Week	Data Science using Python	09th to 13th August 2021	Computer Science and Engineering Department NITTR Chandigarh, Ministry of Human Resource Development, Government of India
Mr. Sumit Kumar	10 Days	Machine Learning & AI	09th to 19th August 2021	Eduxlabs India association with IIT Hyderabad
Ms. Deepti Singh	1 Week	Inculcating Universal Human Values in Technical Education”	09th to 13th August 2021	Computer Science and Engineering Department NITTR Chandigarh, Ministry of Human Resource Development, Government of India
Mr. Rishabh Kamal	1 Week	Data Analysis Using Excel	20th to 24th July 2021	E & ICT Academy, IIT Kanpur
	1 Week	“Inculcating Universal Human Values in Technical Education”	09th to 13th August 2021	All India Council for Technical Education(AICTE)
	10 Days	Data Science and its Applications	07th to 16th March 2022	Conducted by MoE's Innovation Cell & AICTE
Dr. Satya Prakash Yadav	1 Week	UHV Refresher 1 Part 1	23rd to 27th August 2021	Data Science and its Applications

FACULTY ACHIEVEMENT

FACULTY PAPER PUBLISHED

DR. BIPIN KUMAR RAI

Rai, B. K. (2022). Patient-Controlled Mechanism Using Pseudonymization Technique for Ensuring the Security and Privacy of Electronic Health Records. **International Journal of Reliable and Quality E-Healthcare (IJRQEH)**, 11(1), 1-15. DOI: [10.4018/IJRQEH.297076](https://doi.org/10.4018/IJRQEH.297076) (**Scopus Indexed**)

Rai, B. K. (2022). Ephemeral pseudonym based de-identification system to reduce impact of inference attacks in healthcare information system. **Health Services and Outcomes Research Methodology**, 1-19. DOI: [10.1007/s10742-021-00268-2](https://doi.org/10.1007/s10742-021-00268-2) (**ESCI, Scopus Indexed**)

Shahzad, F., Abid, F., Obaid, A. J., Kumar Rai, B., Ashraf, M., & Abdulbaqi, A. S. (2021). Forward stepwise logistic regression approach for determinants of hepatitis B & C among Hiv/Aids patients. **International Journal of Nonlinear Analysis and Applications**, 12(Special Issue), 1367-1396. DOI: [10.22075/ijnaa.2022.5717](https://doi.org/10.22075/ijnaa.2022.5717) (**ESCI, Scopus Indexed**)

Rai, B.K., Verma, R. & Tiwari, S. Using Open Source Intelligence as a Tool for Reliable Web Searching. **SN COMPUT. SCI.** 2, 402 (2021). <https://doi.org/10.1007/s42979-021-00777-4> (**ACM Digital Library Indexed**).

Faculty Name	Publication Details	Date
Dr. Kaushal Kishore	"Student Performance Prediction Using Technology of Machine Learning, Lecture Notes in Networks and Systems, vol 373. Springer, Singapore", https://doi.org/10.1007/978-981-16-8721-1_53	Feb 2022
	"Predict COVID-19 with Chest X-ray, book series (LNDECT, volume 90)", https://doi.org/10.1007/978-981-16-6289-8_16 .	Jan 2022
	"Study and Development of Self Sanitizing Smart Elevator, book series (LNDECT, volume 90)", https://doi.org/10.1007/978-981-16-6289-8_15	Jan 2022
	"Personalized Federated Learning, Federated Learning for IoT Applications", https://doi.org/10.1007/978-3-030-85559-8_3	02 Feb 2022
	"Communication-Efficient Federated Learning, Federated Learning for IoT Applications", https://doi.org/10.1007/978-3-030-85559-8_9	02 Feb 2022

FACULTY ACHIEVEMENT

FACULTY PAPER PUBLISHED

Faculty Name	Publication Details	Date
	"SAHYOG:AN INFORMATION-DELIVERY CHANNEL USING KIOSK & HONEYPOD", AIP Conference Proceedings 2424, 020005 (2022) https://doi.org/10.1063/5.0076720	21 Mar 2022
	"Hand talk: Intelligent gesture based communication recognition & object identification for deaf and dumb", AIP Conference Proceedings 2424, 080007 (2022) https://doi.org/10.1063/5.0076796	21 Mar 2022
	"Blockchain Based Electronic Healthcare Record(EHR)", AIP Conference Proceedings 2424, 070006 (2022) https://doi.org/10.1063/5.0081176	May 2022
Ms. Shivani Sharma & Dr. Bipin Kumar Rai	"OCR based medical prescription and report analyzer", AIP Conference Proceedings 2424, 070006 (2022) https://doi.org/10.1063/5.0081176	01 Feb 2022
	"Automated Voice Assistant , Lecture Notes in Electrical Engineering, vol 828. Springer, Singapore" , https://doi.org/10.1007/978-981-16-7985-8_20	May 2022
	"Federated Learning for Data Mining in Healthcare, Federated Learning for IoT Applications" , https://doi.org/10.1007/978-3-030-85559-8_16	02 Feb 2022
	"Federated Learning Using Tensor Flow, Federated Learning for IoT Applications" , https://doi.org/10.1007/978-3-030-85559-8_10	02 Feb 2022

FACULTY ACHIEVEMENT

FACULTY PAPER PUBLISHED

Faculty Name	Publication Details	Date
Dr. Bipin Kumar Rai & Ms. Shivani Sharma	Medical Prescription and Report Analyzer. In 2021 Thirteenth International Conference on Contemporary Computing (IC3-2021) (pp. 286-295). (Scopus, ACM digital library Indexed) DOI: https://doi.org/10.1145/3474124.3474165.	Aug 2021
Dr.Satya Prakash Yadav	"Review in Wavelet Transforms Based Medical Image Fusion, Evolving Role of AI and IoMT in the Healthcare Market", 10.1007/978-3-030-82079-4_9	1st Jan 2022
Dr. Bipin Kumar Rai	"DevOps Sensing Neuro Cluster, Lecture Notes in Electrical Engineering, vol 828. Springer, Singapore", https://doi.org/10.1007/978-981-16-7985-8_8	May 2022
	"Security Challenges and Solutions for Healthcare in the Internet of Things, Healthcare Systems and Health Informatics: Using Internet of Things", https://doi.org/10.1201/9781003146087	21 Feb 2022
	"Security Issues and Solutions for Healthcare Informatics , Federated Learning for IoT Applications" , 10.1007/978-3-030-85559-8_12	02 Feb 2022

STUDENT ACHIEVEMENT

STUDENT RESEARCH PAPERS

S.No	Topic Event	Roll No.	Student Name	Details of Paper Published	Date	Branch Year
01	Predict COVID-19 with Chest X-ray	1729013010	ANKIT SHARMA	Sharma A., Jha N. (2022) Predict COVID-19 with Chest X-ray. In: Gupta D., Polkowski Z., Khanna A., Bhattacharyya S., Castillo O. (eds) Proceedings of Data Analytics and Management. Lecture Notes on Data Engineering and Communications Technologies, vol 90. Springer, Singapore. https://doi.org/10.1007/978-981-16-6289-8_16 .	01 Jan 2022	IT 4th Year
		1729013027	NIKHIL JHA			
02	Study and development of Self Sanitizing Smart Elevators	1729013043	SANIYA TYAGI	Gupta S., Tyagi S. (2022) Study and Development of Self Sanitizing Smart Elevator. In: Gupta D., Polkowski Z., Khanna A., Bhattacharyya S., Castillo O. (eds) Proceedings of Data Analytics and Management. Lecture Notes on Data Engineering and Communications Technologies, vol 90. Springer, Singapore. https://doi.org/10.1007/978-981-16-6289-8_15 .	01 Jan 2022	IT 4th Year
		1729013047	SATYAN GUPTA			
03	Student Performance Prediction Using Technology of Machine Learning.	1729013034	RAHUL SHARMA	Sharma R. (2022) Student Performance Prediction Using Technology of Machine Learning. In: Sharma D.K., Peng SL, Sharma R., Zaitsev D.A. (eds) Micro-Electronics and Telecommunication Engineering. Lecture Notes in Networks and Systems, vol 373. Springer, Singapore. https://doi.org/10.1007/978-981-16-8721-1_53	01 Jan 2022	IT 4th Year

STUDENT ACHIEVEMENT

STUDENT RESEARCH PAPERS

S.No	Topic Event	Roll No.	Student Name	Details of Paper Published	Date	Branch Year
04	Hand Talk: Intelligent gesture based communication recognition & object identification for Deaf and Dumb	1729013005 1729013049	AKASH KESHARWANI SHREYASHI MAHESHWARI	"Hand talk: Intelligent gesture based communication recognition & object identification for deaf and dumb", AIP Conference Proceedings 2424, 080007 (2022) https://doi.org/10.1063/5.0076796	01 Feb 2022	IT 4th Year
05	SAHYOG: AN INFORMATION-DELIVERY CHANNEL USING KIOSK & HONEYPOD	1729013015 1729013031	DEEPALI RAO PALLAVI GHOSAL	Sharma R. (2022) Student Performance Prediction Using Technology of Machine Learning. In: Sharma D.K., Peng SL., Sharma R., Zaitsev D.A. (eds) Micro-Electronics and Telecommunication Engineering. Lecture Notes in Networks and Systems, vol 373. Springer, Singapore. https://doi.org/10.1007/978-981-16-8721-1_53	01 Feb 2022	IT 4th Year
06	Medical Prescription and Report Analyzer	1729013009 1729013004	ANJANI KUMAR AKASH GOYAL	Sharma R. (2022) Student Performance Prediction Using Technology of Machine Learning. In: Sharma D.K., Peng SL., Sharma R., Zaitsev D.A. (eds) Micro-Electronics and Telecommunication Engineering. Lecture Notes in Networks and Systems, vol 373. Springer, Singapore. https://doi.org/10.1007/978-981-16-8721-1_53	01 Feb 2022	IT 4th Year

ARTICLE

DATA-DRIVEN WORLD

ARTICLE BY- Vikash Kumar(2nd Year CSE-DS)

Data volume is increasing exponentially as the world becomes more digitized and adopts new technologies. According to reports such as "Data Age 2025" by Seagate and "Global Data Sphere" by IDC, the total amount of data is expected to continue growing at a rapid pace, with some estimates predicting that it will double every two years. By 2025, the total amount of data is projected to reach 163 zettabytes (Seagate) or 175 zettabytes (IDC), with much of it generated by individuals through social media, IoT devices, and mobile devices.

Organizations use the large volume of data being generated to gain insights for business purposes and to create algorithms for artificial intelligence and train machine learning models. These models can be used to develop personalized recommendations, detect fraud, forecast weather, and other innovative applications. For example, Tesla has launched self-driving cars that use image classification to navigate. In the realm of automatic programming and development, Google and DataRobot have developed AutoML, a suite of tools that automates machine learning model creation, while OpenAI has released GPT-3, a natural language processing model that uses data modelling and machine learning to generate human-like text.

Data is not only valuable in the tech industry, but also businesses. A study by McKinsey found that companies that use data-driven decision-making are 23 times more likely to acquire customers, 6 times more likely to retain customers, and 19 times more likely to be profitable. The data economy, worth trillions of dollars and growing rapidly, is driven by the value of data as a resource for business growth and innovation. However, as organizations increasingly collect and use data, data privacy has become a major concern. In the past, data privacy has not always been adequately addressed. For example, Cambridge Analytica improperly accessed the personal data of millions of Facebook users in 2018 and used it to target political ads during the 2016 U.S. presidential election. Google faced scrutiny in 2019 for collecting location data from Android devices even when location services were turned off. TikTok faced similar scrutiny in 2020 for collecting large amounts of location and device data from users.

These incidents have led to calls for greater transparency and accountability in data privacy. To address these concerns, several actions have been taken, including the adoption of the GDPR by the European Union in 2018 and the introduction of new privacy features by Apple, and new data privacy measures by Facebook in 2021. These actions aim to give individuals more control over their data and increase transparency and accountability for organizations collecting and using personal data. In conclusion, the increasing volume of data being generated in the digital world presents both opportunities and challenges for organizations.

On the one hand, data can be used to gain insights and drive innovation, leading to increased business growth and profitability. On the other hand, the collection and use of data also raise concerns about privacy and the potential for misuse.

ARTICLE

Smart clothes/technical fashion as a future wave?

ARTICLE BY- Shreya Dixit(2nd Year CSE-DS)

The idea of integration of technology with clothes is an inevitable outcome of the IT industry penetrating into the manufacturing industry.

The technology is making textile industry more sustainable. The carbon-footprints generated due to the excessive use of raw materials of clothing, textiles, is HUGE. Nowadays, technology is evolving to take over the fashion industry. So far, researchers have succeeded in weaving circuits into fabrics of very less precision. China took a step over to build a jacket with 17 invisible pockets, making it efficient and safe for travelers.

Imagine you're on a walk and you want to listen music, or an important call has arrived, all you have to do is to wear a jacket and you are all set, instead of hovering over smartphone.

Bridal gowns made of smart fabrics are of particular appeal to young women, with mind blowing patterns, and, BOOM! You are real life Cinderella now!

Clothes attached with solar energy so that you can charge your phone when you are in a rush, is an incredibly exciting idea. It is observable that, sports and health care are two main areas of smart clothing application. Having a sportswear linked with a heart rate measuring chip can tell information about heart rate, heart fatigue and heart age. The biggest barrier for mass production of smart textiles lies in lack of acknowledgement to technology. Besides, many other factors also hinder the promotion of smart garments, including less comfort, difficulty in washing and higher costs.

Despite these wonderful facts, smart clothing still has a long way to go. But it is foreseen as a futuristic wave.