



# **THE TECH WRAP**

Volume 7 | Issue 4 | October-December, 2024



**School of Engineering & Technology Chitkara University, Himachal Pradesh** 

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21st October ,2024

## Fostering Excellence: A Gesture of Motivation and Recognition by Hon'ble Chancellor Sir

"When efforts are made to become better than we are, everything around us is improved as well."

During their Discrete Mathematics classes, the Second Year CSE students were profoundly inspired by the esteemed Chancellor Sir, Dr. Ashok K. Chitkara. He exhorted the students to submit their notebooks within a designated deadline, assuring that those submitted complete and timely would be bestowed with a special gift. True to his promise, the students were duly recognized, and it was a truly heartwarming spectacle to witness the delight on their faces as they received their prizes. The students conveyed their sincere gratitude to Sir for this generous and thoughtful gesture, which brought unparalleled joy and fulfillment to them.



# **TECHNICAL EVENTS**







1<sup>st</sup> October, 2024

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## **IEEE Day Celebrations**

On the 15th anniversary of IEEE Day, the IEEE Student Branch, organized an exciting celebration under the guidance of Dr. Meenu Khurana, Pro Vice-Chancellor (SOET) and Dr. Sandhya Sharma, the IEEE Student Branch Counselor.

The highlight of the day was an engaging Technical Treasure Hunt, aptly named Electro-Explorers: The IEEE Hunt, which saw the participation of over 100 students. Teams of participants embarked on a challenging quest to discover letters and symbols representing various technical organizations, followed by a second round where they identified the founders of those organizations.

A team of four talented participants emerged victorious, and their achievement was celebrated during a grand prize distribution ceremony, which was followed by a lively cake cutting and an energetic party. The event brought together senior IEEE faculty members, student branch executive committee members, and other student participants in a vibrant atmosphere of unity and celebration.

This event truly embodied the spirit of innovation and camaraderie, highlighting IEEE's dedication to advancing technology and fostering a strong sense of community.







4<sup>th</sup> October ,2024

## Industry Visit to CS Soft Solutions Pvt. Ltd., Mohali

The core members of the ACM Student Chapter and IEEE Student Branch had the privilege of visiting CS Soft Solutions Pvt. Ltd., Mohali. The visit was organized by Mr. Varun Bhardwaj and Dr.Rani under the auspices of the ACM Chandigarh Professional Chapter.

During this enriching visit, students were given a unique opportunity to explore a leading IT firm, learn about its innovative software solutions, and witness its strong industry connections. They toured various departments, interacted with professionals, and gained valuable insights into the practical applications of their academic knowledge in areas such as ASP.NET, PHP, Business Development, Digital Marketing, and mobile application development (iOS, Android, and Flutter). Additionally, students learned about the importance of networking, especially through platforms like LinkedIn etc.





## Game Corridor: Digital Game Expo

The Chitkara University ACM Student Chapter, under the mentorship of Dr. Rani, hosted the *Game Corridor: Digital Game Expo*, providing an exciting platform for second-year students specializing in AR/VR technologies. The event allowed students to showcase their game development skills in the vibrant atmosphere of the university courtyard.

Participants presented their innovative games, engaging with peers and faculty, creating an interactive space for feedback and idea exchange.

As the event drew to a close, anticipation mounted as the top three games were announced. After thorough judging by Dr. Hakam and Dr. Nagesh, the winners were revealed: *Rollin* took 1st place, *Ball Roller* secured 2nd place, and *Honey Bee* claimed 3rd place.

CHITKARA UNIVERSITY This expo not only celebrated the creativity and hard work of the students but also provided a valuable learning experience, inspiring them to continue pursuing their passion for game development and explore future opportunities in the gaming industry.



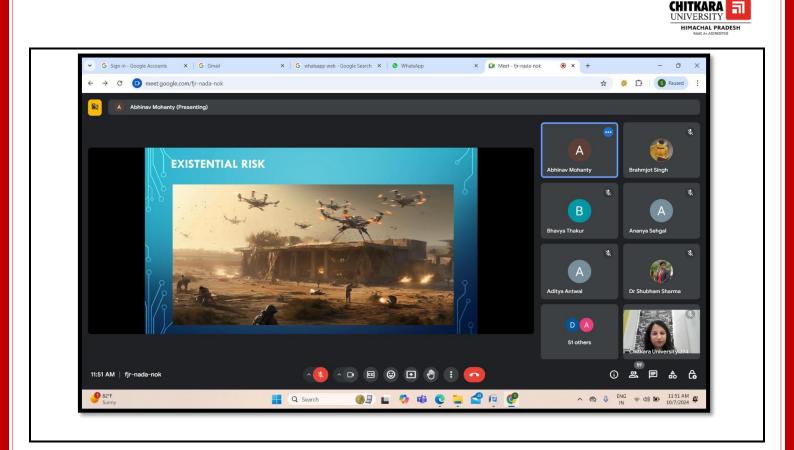


**Shaping AI's Future in Industry Through Intervention of Innovation** 

ACM, Student Chapter in collaboration with IIC and Chitkara Alumni Association Network (CAAN) organized a motivational session entitled "Shaping AI's future in industry through intervention of innovation" for engineering students. The speaker for the session was Dr. Abhinav Mohanty, an alumnus of CSE, Batch of 2008, Chitkara University, Himachal Pradesh. He is working as a Security Researcher at Amazon (AGI), United States.

The session proved to be highly insightful, underscoring the pivotal role of innovation and research in the advancement of AI technologies. It delved into the fundamental pillars of responsible AI, such as transparency, fairness, and ethical considerations, emphasizing the necessity of a nuanced and balanced approach to integrating AI into industry practices. Participants engaged in thought-provoking discussions on the imperative of sustained innovation and rigorous research to navigate the challenges and seize the opportunities posed by AI, ensuring that its development remains in harmony with ethical standards and societal values.

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## **Code to Innovate: Competitive Programming Bootcamp**

The ACM Student Chapter organized the "*Code to Innovate: Competitive Programming Bootcamp*", featuring Mr. Jaskaran Singh, an IIT alumnus, Software Engineer at Google, and ICPC World Finalist 2023, as the expert speaker.

The bootcamp offered students a hands-on opportunity to strengthen their foundational coding skills, with a primary focus on the basics of Data Structures and Algorithms (DSA). Participants were actively engaged in practical coding sessions, applying these concepts to solve real-world problems.

Beyond the fundamentals of DSA, the event also highlighted strategies for optimizing code and enhancing debugging techniques—critical skills for competitive programming. The bootcamp was a resounding success, inspiring students to deepen their understanding of DSA and motivating them to pursue further opportunities in competitive programming and software development.

Under the guidance of Dr. Rani Kumari, the bootcamp generated significant interest among students, providing them with invaluable insights and skills for their future endeavors.









24<sup>th</sup> October, 2024

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## Sustainability as an Important Career Move

The Centre of Excellence for Sustainability at Chitkara University, in collaboration with the Indian Society for Technical Education, organized a session on "Sustainability as an Important Career Move." Delivered by Mr. Vikas Verma, North Region Head of UNDP, the session highlighted the growing significance of sustainability in industries and its career opportunities. Key topics included global trends like the UN SDGs, Paris Climate Agreement, and green initiatives, along with career paths in corporate sustainability, renewable energy, sustainable finance, and more. The session emphasized the rising demand for sustainability professionals across sectors and concluded with a positive outlook on sustainability as a transformative and lucrative career choice.



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12<sup>th</sup> November, 2024

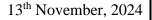
## **CodeWars 4.0: Fueling Innovation Through Competition**

Chitkara University, in collaboration with the IEEE Student Branch, hosted the 4th season of "*CodeWars: Fueling Innovation Through Competition*," a bi-annual hackathon. Sponsored by CodeTantra and Toggy India, the event presented students with a series of coding challenges designed to test their problem-solving, programming, and logical thinking skills.

The competition encouraged innovation, teamwork, and personal development, reinforcing the university's commitment to nurturing the next generation of tech leaders and promoting excellence in technology.

Participants competed individually, tackling coding challenges of increasing complexity that tested their analytical abilities, logical reasoning, and proficiency in various programming languages. The event culminated in a grand awards ceremony, where the top performers were recognized and celebrated for their exceptional achievements.





## **Emotional Intelligence: The Key to Effective Leadership**

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The Department of Computer Applications, in collaboration with the Chitkara Alumni Association Network (CAAN) and IIC, organized an online motivational session titled "Emotional Intelligence: The Key to Effective Leadership" for students.

The session was led by Dr. Payal, an alumnus of Chitkara University, currently an Assistant Professor at Thapar Institute of Engineering and Technology, and Ms. Shivani Gautam, Assistant Professor at Chitkara University. The session provided valuable insights into how emotional intelligence influences leadership effectiveness, focusing on enhancing self-awareness, empathy, and interpersonal skills. The speakers shared practical strategies for applying emotional intelligence in leadership, making the discussion relatable and engaging. Participants left with actionable takeaways, emphasizing the significance of emotional intelligence for personal and professional success.





#### **CODEPHY - A biannual event embracing Coding and Physics**

The ISTE Student Chapter, under the aegis of IIC, hosted the third season of "CODEPHY: Showcase of Technical Innovative Projects." This biannual event seamlessly integrated coding and physics, featuring student projects focused on Gaming Science developed using Python and kinematics. CODEPHY 3.0 fostered collaboration and the exchange of ideas, culminating in an award ceremony that recognized the top three teams for their outstanding contributions. Organized by Dr. Vibha Ayri and Dr. Anshu Sharma, with guidance from Dr. Ashok Kumar and Dr. Madhu Gupta, the event inspired participants to push the boundaries of innovation in their respective fields.



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26<sup>th</sup> November, 2024

## **Empowering Innovation: Exploring the World of FOSS**

The Department of Computer Science and Engineering organized a session titled "Empowering Innovation: Exploring the World of FOSS" to encourage students to join the Free and Open Source Software (FOSS) community. The session featured Mr. Vishal Arya, Program Director at FOSS United Foundation, who shared his expertise on the transformative potential of FOSS in technology and innovation. Key topics included demystifying FOSS, boosting career opportunities, empowering creativity and collaboration, and supporting sustainability in technology. Special thanks to Gaurav Mehta for organizing the event and the Program Incharges for encouraging student participation.









25<sup>th</sup> November, 2024

**Empowering Communities with Solar Energy: Pioneering Innovation for Sustainable** Solutions

IEEE Student Chapter of Chitkara University, Himachal Pradesh, in collaboration with IEEE SIGHT Delhi Section, hosted the event "Empowering Communities with Solar Energy: Pioneering Innovation for Sustainable Solutions" at Govt Senior Secondary School, Mandhala, Himachal Pradesh. The event aimed to raise awareness about energy conservation and the potential of solar energy in addressing energy challenges. Highlights included an educational session introducing energy conservation and solar energy benefits, followed by a hands-on activity where students assembled solar-powered circuits, learning about solar panels and electrical connections The event emphasized community impact, encouraging students to share their knowledge with family and peers. Refreshments were provided, enhancing the learning environment. Six students were awarded for outstanding participation, motivating further exploration in renewable energy. The initiative underscored the IEEE Student Chapter's commitment to promoting sustainable practices and empowering communities through education.



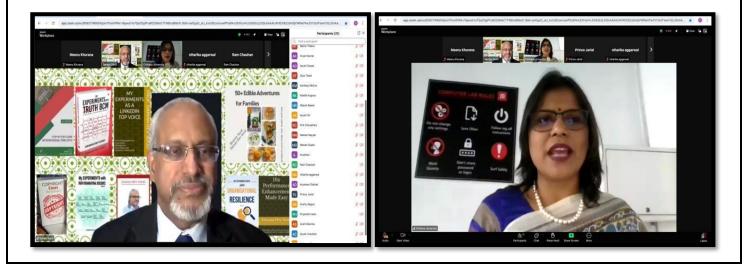


## **Strengthening Resilience Through Innovation: Thriving in Times of Challenge**

"If you can't fly then run, if you can't run then walk, if you can't walk then crawl, but whatever you do you have to keep moving forward." – Martin Luther King Jr.

"Strengthening Resilience Through Innovation: Thriving in Times of Challenge" the session, conducted online, was both inspiring and insightful, highlighting strategies to enhance resilience in the face of challenges. Mr. Daman Dev Sood, an internationally renowned resilience trainer and consultant with over 14,500 hours of training experience, led the session.

His knowledge and passion for the subject were truly empowering. Dr. Vidhu Baggan hosted this valuable discussion.





## From Idea to Execution: Key Insights for Thriving on Your Startup Journey

Chitkara Alumni Association Network (CAAN), in partnership with the Institution's Innovation Council (IIC), hosted an insightful session titled "From Idea to Execution: Key Insights for Thriving on Your Startup Journey" at Chitkara University. The session was led by Priyanka Sekhri, Co-Founder of The SalesInc and alumna from the CSE Batch of 2010.

She shared invaluable insights into various facets of the startup journey, including ideation, market validation, funding, and the challenges of execution, offering practical examples and actionable advice.

Priyanka also reflected on how the supportive environment at Chitkara University played a pivotal role in shaping her entrepreneurial career. The session concluded with a recognition from Dr. Rajnish Sharma, Vice Chancellor of Chitkara University.



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27th-29th November, 2024

## **Explorihibit 2024: Showcasing Innovation and Research**

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The third edition of *Explorihibit*, the bi-annual event of the ACM Student Chapter, took a significant leap forward, by incorporating projects, poster presentations, case studies, and research articles. Forty teams showcased their expertise in Augmented Reality, IoT, database design, and networking technologies, reflecting meticulous preparation and a commitment to sustainable development goals.

Guided by mentors the event embodied experiential and project-based learning. Students were recognized for their innovative research and technical proficiency, while evaluators critically assessed their work on key parameters. The event fostered collaboration, innovation, and a vibrant culture of learning, marking another milestone in academic excellence.





3<sup>rd</sup> December, 2024

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#### **Techfront: Showcasing Innovation**

The Department of Computer Applications, in collaboration with CAAN and IIC, organized a technical project exhibition titled "Techfront: Showcasing Innovation", celebrating the creativity of the BCA 2022 batch.

Chief Guest Ms. Mehak Sharma, an accomplished alumna from the BCA Batch of 2019 and Assistant Project Coordinator at Synopsys, Hyderabad, reviewed the projects, offering valuable feedback and inspiring participants.

Pro Vice-Chancellor Dr. Meenu Khurana honored winners Suman Mondal, Sunil Sahu, and Rahmat, making the event a memorable celebration of student innovation and excellence.





## **ACM - Hour of Code: Inspiring Future Innovators**

The ACM Student Chapter at Chitkara University, in collaboration with IIC, hosted the "Hour of Code," a global initiative designed to spark interest in programming and technology among young learners. Held during Computer Science Education Week (CSEdWeek), the event featured an engaging three-day program titled "Code to Innovate: Python Bootcamp and Coding Challenge."

Participants had the opportunity to explore the fundamentals of Python programming through hands-on sessions and apply their knowledge to solve real-world problems. The excitement culminated in a competitive Coding Challenge, where participants showcased their problem-solving skills. The top performers will be treated to an exclusive on-campus pizza party, sponsored by ACM, the world's largest educational and scientific computing society.

The event, organized under the guidance of Dr. Rani, faculty coordinator of the ACM Chapter, received an enthusiastic response, reflecting ACM's mission to inspire and nurture the next generation of tech innovators.





## **Digital Innovators: Showcasing Creativity through Project-Based Learning**

The ACM Student Chapter organized "Digital Innovators: Next Gen Web Competition" highlighting the success of Project-Based Learning (PBL) pedagogy in the Web Technologies course.

First-year students showcased their creativity and technical skills by designing impressive websites using HTML and CSS. The competition celebrated their innovation, problem-solving abilities, and technical proficiency, leaving evaluators and attendees impressed. Top-performing teams received exclusive goodies, and evaluators provided valuable feedback to help participants refine their web development skills. The event, guided by faculty members Mr. Alok Agarwal, Dr. Rani, and Dr. Madhu Gupta, exemplified the impact of PBL in fostering student growth and innovation.





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Chitkara University organized the "Ready to be a Voter" camp with the SDM office, Baddi, to promote voter registration and electoral awareness among students.

## Break It till You Make It

14<sup>th</sup> November, 2024

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Toastmasters International hosted "Break It Till You Make It," enhancing BCA students' communication, creativity, and storytelling skills, with Tejasavi, Rahul, and Krish earning top honors.

## Chitkara University Athletes Shine at PARAKARAM'24

#### 8<sup>th</sup> November-10<sup>th</sup> November, 2024

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Chitkara University excelled at PARAKARAM'24, winning top honors in multiple sports and showcasing outstanding talent, teamwork, and dedication.

## **CEO@20** Cohort Initiative Recap: A Day in the Life of a Founder

9<sup>th</sup> November, 2024



The CEO@20 Cohort gained valuable entrepreneurial insights through shadowing and expert sessions with Mr. Sameer Sharma, CEO of uEngage, which inspired future startup leadership

### National Entrepreneurship Day Celebrations: Emerge Prelude

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The EMERGE Prelude, celebrating National Entrepreneurship Day, brought together students and alumni for inspiring talks and meaningful connections. Student founders Divam Wadhwa, Sharad Dabra, and Aniket Bhardwaj shared their journeys, fostering engagement and strengthening the entrepreneurial community.



The ACM-W India Chapter hosted its flagship event, ACM-W Celebrations, at Chitkara University, Punjab, to empower women in technology. Dr. Rani Kumari led 60 students from Chitkara University, Himachal Pradesh, showcasing its commitment to diversity. Renowned speakers delivered impactful lectures, and a panel discussion on tech-driven social innovations highlighted technology's role in gender equality. The event inspired participants to advance women's contributions in computing.



Chitkara University hosted a session with Mr. Prateek Mankad, equipping CSE students with practical insights on cash flow management and financial strategies for entrepreneurship.



## FACULTY DEVELOPMENT PROGRAMS ORGANIZED





7<sup>th</sup> -14<sup>th</sup> November, 2024

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#### Mental Health and AI: Innovations in Detection, Treatment, and Support

Chitkara University, Himachal Pradesh, successfully conducted its seventh Faculty Development Program (FDP), organized by AIU-CUHP-AADC in collaboration with IQAC. The program featured insightful sessions by industry leaders and academic experts, attended by over 70 participants.

Notable speakers included Mr. Hitesh Garg from NXP Semiconductors and Dr. Alok B. Mukherjee from Leads NexTech India, who discussed AI-driven innovations in healthcare and health analytics. Eminent academicians such as Dr. Ramajayam Govindaraji from IIT Mandi and Dr. Richa Shri from Punjabi University also delivered engaging sessions, along with other experts from renowned institutions. Dr. Raj Mittal Singla highlighted the ethical considerations of AI in mental health, while Ms. Sheerin Zadoo from the Central University of Jammu was recognized as the most active participant. Gratitude was expressed to the Hon'ble Chancellor Dr. Ashok K. Chitkara, Pro-Chancellor Dr. Madhu Chitkara, Vice Chancellor Dr. Rajnish Sharma, and Pro-Vice Chancellor Dr. Meenu Khurana for their steadfast support. The event, organized by a dedicated team, concluded with a valedictory session and a vote of thanks from Dr. Nitin Verma. The FDP was a resounding success, fostering knowledge and collaboration in AI and emerging technologies.









18th -22nd November, 2024

## **Professional Etiquettes: Creating Harmony and Efficiency through Professional Conduct**

To enhance harmony and productivity, the School of Engineering and Technology, in collaboration with Chitkara University Professional Development Centre (CUPDC), conducted a 4-day Staff Development Program on "Professional Etiquettes: Creating Harmony and Efficiency through Professional Conduct" for Non-Teaching Staff. The program was designed to improve workplace skills and foster a professional environment, offering practical insights into effective communication, professional behavior, and workplace decorum.

Key topics included verbal and non-verbal communication, email, telephone, and WhatsApp etiquette, time management, and prioritization to help participants manage their roles effectively.

The program also emphasized the importance of teamwork and leadership, encouraging participants to collaborate, and taking initiative. Additionally, it covered conflict resolution, helping participants understand and manage conflicts professionally to maintain a positive work environment. Aligning personal contributions with Chitkara University's values was another important aspect, ensuring that staff represent the institution with pride and professionalism. The program also provided strategies for interacting with guests, parents, and students, emphasizing professional conduct.

We extend our heartfelt thanks to Mr. Manish, the expert speaker from Languafina, for his engaging sessions, to Mr. Viney Khurana, Director, CUPDC, Ms. Akanksha for organizing and coordinating this valuable event.





9<sup>th</sup> -20<sup>th</sup> December, 2024

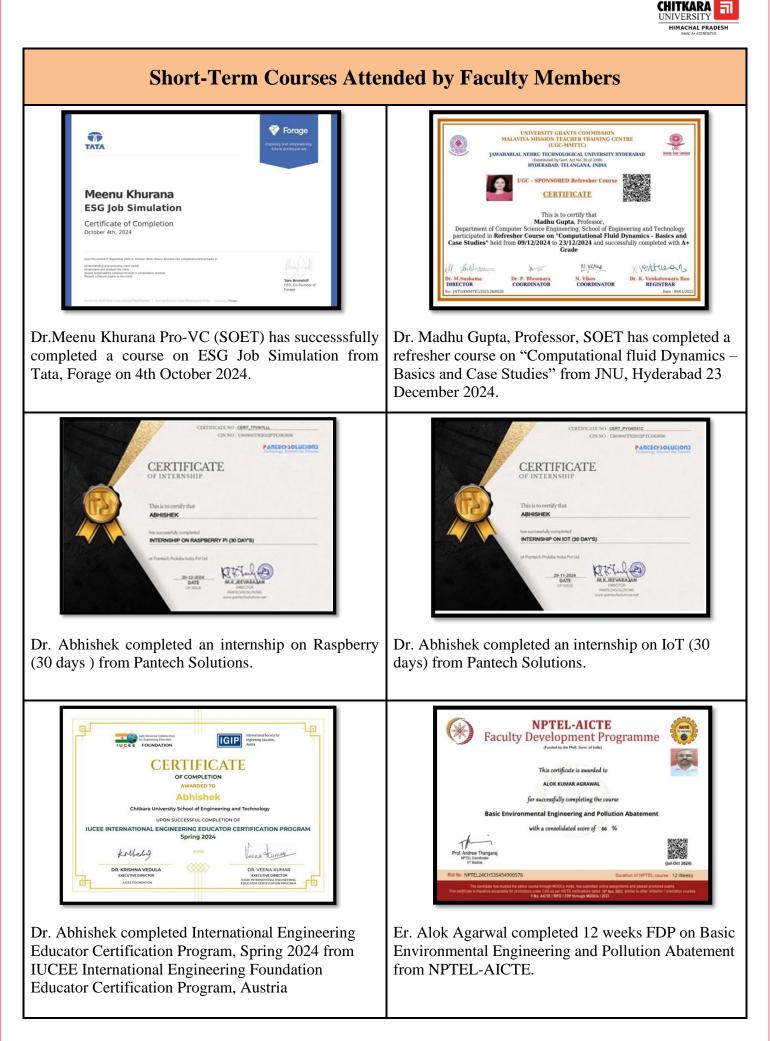
## **Innovating with Machine Learning and IoT**

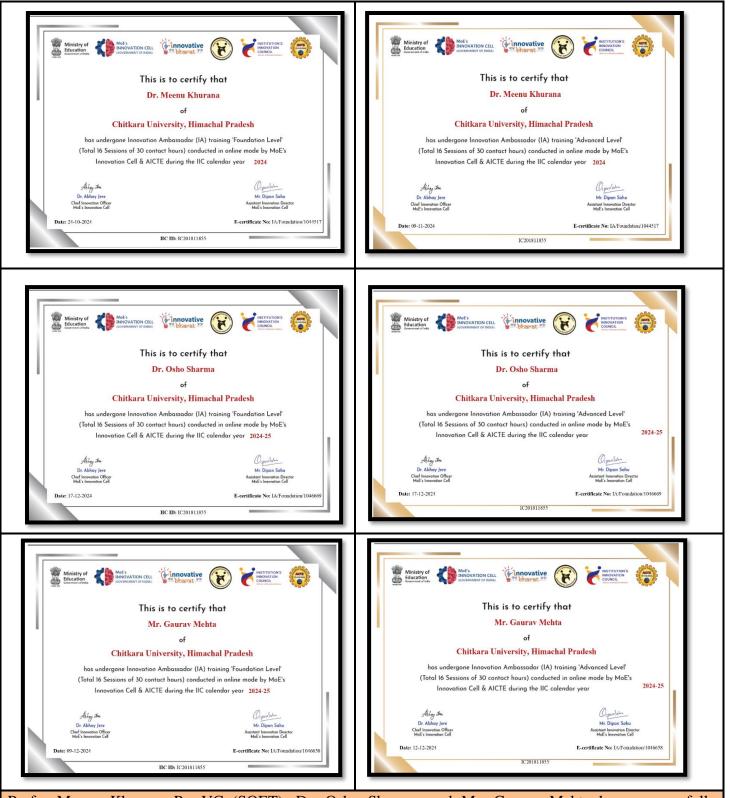
Chitkara University, in collaboration with the Institution Innovation Council (IIC) and EICT Academy IIT Roorkee, successfully organized a 10-day Faculty Development Program (FDP) titled "Innovating with Machine Learning and IoT." Conducted in a hybrid mode, the program attracted 48 participants from across India, offering a unique opportunity for faculty members to deepen their understanding of the integration of Machine Learning (ML) and the Internet of Things (IoT) technologies. The program featured a series of expert-led sessions delivered by distinguished speakers from academia and industry, who shared their expertise on the latest trends, challenges, and innovations in the fields of ML and IoT. Participants gained practical insights into how these cutting-edge technologies can be applied across various sectors to drive innovation and enhance problem-solving capabilities. The FDP also included hands-on sessions, interactive discussions, and case studies, fostering a collaborative learning environment.

The program's success highlights Chitkara University's commitment to enhancing the knowledge and skills of faculty members in emerging technologies, empowering them to stay at the forefront of academic and technological advancements.



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Prof. Meenu Khurana Pro-VC (SOET), Dr. Osho Sharma, and Mr. Gaurav Mehta have successfully completed the IIC Innovation Ambassador Training at both the Foundation and Advanced levels.





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Mr. Tapas Sharma attended a two-day FDP on "Learn to Protect, Secure, and Maximize Your Innovations" from December 17-18, 2024, organized by the Cell for IPR Promotion and Management, Qualcomm. Mr. Tapas Sharma attended a two-day FDP titled "Learn to Protect, Secure, and Maximize Your Innovations" from December 17-18, 2024, organized by the Cell for IPR Promotion and Management, Qualcomm.



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## CHITKARA UNIVERSITY

# **PUBLICATIONS**





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S. No.	Authors	Title	Name Of The Journal / Conference/ Book Chapter
1	Rani Kumari, Parmanand Astya, Praveen Kantha, Damandeep Kaur	Detection of Dental Cavity using Wireless Sensor based Technology	5th International Conference on Advances in Computing, Communication Control and Networking- ICAC3N
2	Ravita Chahar, Ashutosh Kumar Dubey, Sushil Kumar Narang	Multiclass Classification of Mental Health Disorders Using XGBoost-HOA Algorithm	SN Computer Science
3	Neelam Sharma, Himanshu Mehendiratta, Sukhbir Singh, Arun Lal Srivastav, Ladli Kishore, Madhaw Dwivedi, Anita Rani	Elucidating the Role of Transferosomes as a Promising Platform for Management of Various Types of Arthritis: A Comprehensive Review	Bio Nano Science
4	Amrendra Bhushan1, Vikas Chandra Goyal1, Arun Lal Srivastav	Greenhouse gas emissions from inland water bodies and their rejuvenation: a review	Journal of Water and Climate Change
5	Shaminder Kaur, Vikas Malhotra, Neha Singh, Shilpi Birla, Sandhya Sharma, Jaswinder Singh	Accessing dependability analysis against fault injection attacks in robotics industry	International Conference on Emerging Technology and Sustainable Solutions
6	Sandhya Sharma, Shaminder Kaur, Navneet Kaur	Ensemble of CNN based Deep Learning model for the Recognition of Skin Cancer Images	The IEEE India Council International Subsections Conference, Indiscon 2024
7	Meenu Khurana, Abhishek Thakur, Praveen Kantha, Chin- Shiuh Shieh, Rajesh K. Shukla	Machine Learning Algorithms	Springer series, Communications in Computer and Information Science
8	Arun Lal Srivastav, Anthony Bagherian, Dipankar Ghosh	The Circular Bio-economy: Pathways to Sustainability and Resource Optimization	Clean Technologies and Environmental Policy



9	Alok Kumar Agrawal, Amit Vajpayee, Merry Saxena, Pradeepta Sarangi, Karan Bajaj, Ashok Kumar Sahoo	Feature Based Machine Learning Models For Cardiovascular Disease Diagnosis: An Experimental Analysis	International Conference on Machine Learning Algorithms (ICMLA-2024)
10	Abhishek Thakur, Shahbaz Afzal	Unsupervised Learning for Image Forgery Detection	International Conference on Machine Learning Algorithms
11	Vandana Sharma, Meenu Khurana, Rama Krishna Challa	VGG-Inspired Convolutional Neural Network Denoiser for the Enhancement of Mammogram Images	International Conference on Machine Learning Algorithms
12	Hakam Singh, Ramamani Tripathy, Navneet Kaur and Monika Parmar	Improved Whale Optimization Algorithm for Cluster Analysis	International Conference on Machine Learning Algorithms
13	Ramamani Tripathy, Hakam Singh, Navneet Kaur, and Monika Parmar and Rudra Kalyan Nayak	Robust Iris Image Encryption via Black Widow Optimization Method	International Conference on Machine Learning Algorithms
14	Neha Dhiman, Hakam Singh, Abhishek Thakur	Exploring Diverse Techniques in Image and Video Forgery	International Conference on Machine Learning Algorithms
15	Sandhya Sharma, Shaminder Kaur	A Review on the Recognition of Monkeypox Skin Lesions implementing various deep learning models	ICESS-2023
16	Navneet Kaur, Monika Parmar, Ramamani Tripathy, Hakam Singh, Sandhya Sharma	Machine learning-based detection of forgery in digital images	International Conference on Machine Learning Algorithms
17	Gaganpreet Kaur, Amandeep Kaur, Meenu Khurana, Robertas Damasevicius	Sentiment polarity analysis of love letters: Evaluation of TextBlob, Vader, Flair, and Hugging Face transformer	Computer Science and Information Systems
18	Monika Parmar, Navneet Kaur, Hakam Singh, Ramamani Tripathy, Lipika Gupta	Security System for IoT Applications based on Hybrid Fuzzy Possibility C- Means Clustering	2024 International Conference on Integrated Circuits, Communication, and Computing Systems (ICIC3S)
19	Anthony Bagherian, Arun Lal Srivastava, Subhodeep Mukherjee	Exploring barriers and strategic approaches in smart factory adoption: a real-world case study in a German manufacturing company	International Journal of Advanced Manufacturing Technology



20	Mukesh Kumar, Veena Chaudhary, Vidisha Chaudhary, Arun Lal Srivastav, Sughosh Madhav	Impacts of microplastics on ecosystem services and their microbial degradation: a systematic review of the recent state of the art and future prospects	Environmental Science and Pollution Research
21	Deepti Barhate, Sunil Pathak, Bhupesh Kumar Singh, Amit Jain, Ashutosh Kumar Dubey	A systematic review of machine learning and deep learning approaches in plant species detection	Smart Agricultural Technology
22	R.S. Aswal, Mukesh Prasad, Jaswinder Singh, Hakam Singh, Utpal Shrivastava, Manoj Wadhwa, Om Prakash Pandey, Johnbosco C. Egbueri	Spatial analysis and soft computational modeling for hazard assessment of potential toxic elements in potable groundwater	Scientific Reports
26	Manan Sodha, Santosh Kumar Tripathy, Rudra Kalyan Nayak, Ramamani Tripathy, Nilamadhab Mishra, Hakam Singh	Unveiling the Effectiveness of ML Models for Predicting Forex Trends: An AI-ML-Driven Service Into Trade Marketing	IGI Global Scientific Publishing
27	Kamal, Abhishek Maurya, Merry Saxena, Pradeepta Kumar Sarangi, Ashok Kumar Sahoo, Monica Dutta	Using Deep Learning Algorithms for Accurate Diagnosis and Outbreak Prediction of Monkeypox	International Conference on Innovative Practices in Technology and Management
28	Gurpreet Singh, Gurudev Yadav, Jyoti Gupta, Pradeepta Kumar Sarangi, Ashok Kumar Sahoo, Ajay Krishan Gairola	Analyzing the Effectiveness of Machine Learning Models for Next Day Cryptocurrency Price Prediction	4th International Conference for Intelligent Technologies (CONIT)

S. No. Author Title		Title	Name Of Conference	
1	Dr. Vidhu Baggan Enhanced K-means Clustering of Tasks and Virtual Machines for Load Balancing in Fog Environment		13th International Conference on SMART-2024, TMU	
2	Ramamani Tripathy	Machine Learning Modelsand FOREX Analysis: A Comparison with HybridASCIS, 2024		
3	Pradeepta Sarangi	ngi Feature Extraction and Machine Learning Based Predictive Models for Heart Diseases Prediction: Analyzing the Effectiveness of Multiple Models ASCIS, 2024		
4	Pradeepta Kumar Sarangi	Using Machine Learning to Analyze Voice Disorders for Parkinson's Disease Detection	ICTACS-2024	
5	Madhu Gupta	Enhancing Decision Reliability with 2-D Linguistic Intuitionistic Fuzzy Power Aggregation Operators	ICETAS, Bahrin	
6	Dr. Anshu Sharma	Performance Evaluation of Flexural Resonators for Different Types of Electromechanical Materials	rent Types of ICMTP-2024	
7	Er. Alok Kumar Agarwal	FOREX Analysis and Machine Learning Models Prior Interpretations of Currency Exchange RateSMART-2024		
8	Er. Alok Kumar Agarwal	mar Cyber Bullying Detection and Classification Using Machine Learning Algorithms Cybernation & Computa Graphic Era Hill Univer Dehradun		

# **Paper Presented in Conferences**





# PATENTS

Patents Granted					
Sr No.	Title	Inventor	Application No	Granted date	Design /Utility
1	Reconfigurable Disposable Plate	Kapil Sharma, Hakam Singh, Pradeepta Sarangi	432321-001	04-12-2024	Design

Patents Filed					
S. No.	Title	Inventor	Filing Date	Application No	Design /Utility
1	Iot Based Smart Gas Stove	Rinku, Ashu Taneja, Kritik Dhiman	31-10-2024	202411083619	Utility
2	Magnetic Strap Bracelet For Craftsman	Minaxi Dassi, Vishal Dhiman, Vardhan Chauhan, Vishwajeet Rehalia, Vikas Sharma	31-10-2024	202411083620	Utility
3	An Eco-Friendly Bag With Self-Weighing Ability	Navneet Kaur, Muskaan Kakkar, Divij Sharma	31-10-2024	202411083622	Utility
4	Motor Bike With Manual Paddling System	Minaxi Dassi, Abhay Kumar	31-10-2024	202411083616	Utility
5	Biochar And Magnetic Beads Derived From Ficus Religiosa Leaves For Water Purification And Related Methods	Lata Rani, Nitin, Mehmanjeet Kaur, Kumud, Kriti, Kumar Apurav Raj, Arun Lal Srivastav, Jyotsna Kaushal	31-10-2024	202411083618	Utility
6	Multipurpose Laptop Bag With Foldable Tray	Sandhya Sharma, Kritik Bhatt	31-10-2024	202411083628	Utility
7	Height Adjustable Ladder With Slip Sensors And Related Methods	Tapas Sharma	31-10-2024	202411083629	Utility
8	Washing Machine With Filter Cleaning Indicator And Related Methods	Tapas Sharma	31-10-2024	202411083630	Utility
9	Smart Dustbin For	Rakesh Kumar, Harpreet	31-10-2024	202411083625	Utility 39



	Preventing Food Wastage	Kaur			
10	Accidental Safety Device for Preventing Sleep- Related Driving Accidents	Monika Parmar, Vansh Nagpal	31-10-2024	202411083624	Utility
11	Insulated Vehicle Cover and Related Methods	Tapas Sharma	31-10-2024	202411083627	Utility
12	Automated Titration Bed Shaker	Vivek Puri, Ameya Sharma, Divya Dheer, Nitin Verma	31-10-2024	202411083631	Utility
13	Water Bottle Cap	Dr. Shahbaz Afzal	31-10-2024	436252-001	Design
14	Enriched Nutrient Pot for Flora	Tapas Sharma	31-10-2024	436253-001	Design
15	Ai- Enabled Intelligent Food Warmer	Rinku Saini, Ashu Taneja, Kritik	31-10-2024	436251-001	Design
16	System And Method for Ai-Driven Fitness Training	Monika Parmar, Navneet Kaur	05-11-2024	202411084760	Utility
17	Peltier-Based Temperature Maintenance Device for Laboratory Reactions	Shivendu Prashar, Gurpreet Singh, Pankaj, Mohammad Arif, Nitin Verma	05-11-2024	202411084690	Utility
18	Burner Stand	Tapas Sharma	18-12-2024	441125-001	Design
19	Suicide Prevention System for Ceiling Fans	Dr. Shivendu Prashar, Dr. Arun Lal Srivastav, Koushik Adak	17-12-2024	202411100146	Utility
20	Kalm- An Apple Organic Pen	Dr. Shahbaz Afzal	28-12-2024	442367-001	Design
21	Composting Device	Atul Semwal, Chhaya, Dr. Harpreet Kaur and Dr. Arun Lal	30-12-2024	202411104616	Utility
22	Modular Safety and Cleaning Assistive Device for Ceiling Fans	Rohit Verma, Dr. Hakam Singh and Dr. Ramamani Tripathy	30-12-2024	202411105128	Utility



# **STUDENTS' ACHIEVEMENTS**

### Paper Presented by Student at International Conference

Ashwani Kumar, B.E, CSE third year student presented a research paper entitled "Deep Learning Based Monkeypox Virus Detection Model Using Skin Lesion Images" at 4<sup>th</sup> International Conference on Technological Advancements in Computational Sciences (ICTACS), organized by Amity University, Uzbekistan.

CHITKARA UNIVERSITY

### Parv Sharma and Arshdeep Won Cash Prizes in National Level Hackathon

The finale of **HackIndia 2024** was held at the Radisson Blu Hotel, Delhi, from 17th to 18th October 2024. In the highly competitive finale, the Chitkara University team—Parv Sharma (UID- 2211981266) and Arshdeep Rooprai(UID- 2211981093) secured the **second runner-up** position, winning **₹20,000 in prize money**.





SOET Students Won Fabulous Prizes in the Inter-University Sports Fiesta Parakarm'24

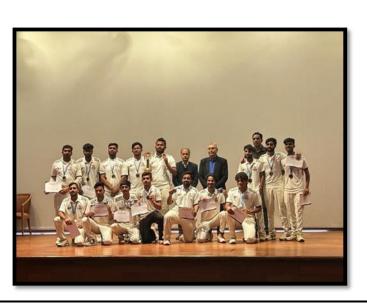
Athletes from engineering shine at inter university sports fiesta PARAKARAM'24. Students demonstrated exceptional skills and dedication in this tournament, held at Jaypee University, Solan from 8 Nov to 10 Nov 2024.

Secured top honors in: - Badminton, Kabaddi, Cricket, Powerlifting (83-93 kg and below 66 kg categories)

Secured second place in: - Basketball, Football, Table Tennis (Girls), Powerlifting (65-74 kg category)

These impressive achievements at a highly competitive level showcase our athletes' hard work and commitment. They underscore the growing strength and spirit of our sports community.

<b>Cricket (First Position)</b>			
Stu	Students		
Aazim	Rakshit		
(2211981006)	(2411981454)		
Krish Dhiman	Sahil Khan		
(2211981291)	(2213986045)		
Madhav Sharma	Shubham Dagar		
(2213986027)	(2311981511)		
Abhigya	Rudra		
(2311981018)	(2211981322)		
Vivek Singh	Manish Suthar		
(2211981468)	(2111981115)		
Kishan Bhardwaj	Vaibhav Singh		
(2411981285)	(2311981557)		

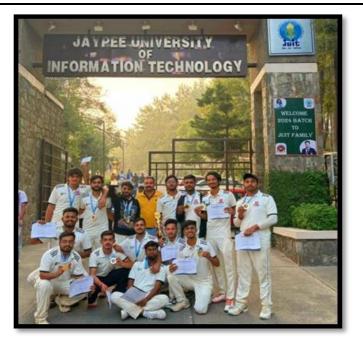




Students		
Tanmay Garg	Manik Rattan	
(2111891204)	(2411981323)	
Dhruv Dev Sharma	Kanishk	
(2411981194)	(2411981288)	
Akshit Mankotia (2111981288)		

Football Team (Boys): Second Position			
Students			
Vishal Singh Kritagya   (2211981462) (2411981641)			
Dhruv Walia	Sahil Chaudhary		
(2111981068)	(2211981331)		
Sourav Kumar	Lalit		
(2211981402)	(2311981310)		
Niraj Shrestha	Daksh		
(2211981476)	(2311981170)		
Nitesh Rawat	Priyanshu Kumar		
(2311981357)	(2211981280)		





### **Basketball Winners (2nd Position)**

Students			
Divyanshu Sharma	Rishav Thakur		
(2111981250)	(2117981068)		
Thakur Abhay Singh	Saransh		
(2211981437)	(2317981101)		
Rizul	Akshay Kumar		
(2311981433)	(2311981051)		
Ayush Kumar	Tejas		
(2211981121)	(2311981051)		
Kumar Vaibhav (2311981299)			





### Winners in Powerlifting (Second Position)

Students		
Tanmay Garg	Manik Rattan	
(2111891204)	(2411981323)	
Dhruv Dev Sharma	Kanishk	
(2411981194)	(2411981288)	
Akshit Mankotia	Karan Singh	
(2111981288)	(2311981270)	
Gaurav Ankesh (2311981202) (2211985007)		
Shubamdeep Singh (2311981488)		

Kabaddi (First Position)			
Stu	Students		
Mohit Sharm	Archit Chandel		
(2411981353)	(1911985039)		
Vardhan Reddy	Ram		
(2211981220)	(2311981416)		
Aditya Sharm	Devansh Sharma		
(2311981040)	(2311981184)		
Lakshay Rana	Deepak Uniyal		
(2111985030)	(2211981138)		
Anmol SharmaPrajwal(2311981084)(2311981382)			
Daksh Sharma (2411981173)			

Table Tennis Team (Girls): Second<br/>Position

Students

Shruti Kahlon (2311981487) Meghna

(2211981221)

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9<sup>th</sup> December, 2024

UNIVERSITY

## **Bibliophile Award**

The library honored five students for their dedication to reading. The winners—Ayush Sharma, Aryan Gupta, Dhruv Dalal (CSE), Shruti Kumari Sah, and Dipendra Sharma (BCA)—received certificates, prizes, and public recognition within the library, inspiring others to participate.



#### 1<sup>st</sup> position in Rangoli making competition in National Integration Camp

Ms. Kunshika (SOET-CSE 6<sup>th</sup> Semester) secured 1<sup>st</sup> position in Rangoli making competition in National Integration Camp organized by Chaudhry Charan Singh Haryana Agricultural University, Hisar in collaboration with State NSS cell, Department of higher education, Haryana.



Team Parivartan Shines as Runners-Up in Smart India Hackathon 2024 Grand Finale at IIT Bhubaneswar

Team "Parivartan" from Chitkara University, Himachal Pradesh, excelled as runners-up in the Grand Finale of the Smart India Hackathon 2024 - Software Edition, held at IIT Bhubaneswar on December 11-12, 2024. Competing under the Disaster Management problem statement by NDRF, Ministry of Home Affairs, the team was among the top 5 selected nationwide from 364 submissions. Their achievement reflects their innovation, teamwork, and the invaluable support from the university mentors.

The six members of Team Parivartan from the 2023 Computer Science and Engineering batch are: Ananya Tewari , Satyam Sharma , Swasti Mohanty , Abhinandan Gupta, Sujal Shrestha, Anshul Kashyap.



## **ALUMNI CONNECT**

Aseem Singh Grover and his wife, Payal Jhund, proud alumnus of Chitkara University's CSE Batch of 2010, visited the Himachal Pradesh campus and met with Vice Chancellor Dr. Rajnish Sharma. Currently residing in the USA, their successful careers highlight the university's global impact. During their visit, they expressed heartfelt gratitude and conveyed special regards to Hon'ble Chancellor Dr. Ashok Chitkara and Pro Chancellor Dr. Madhu Chitkara. The university takes great pride in their inspiring achievements.

Dr. Madhu Chitkara, Hon'ble Pro Chancellor, had a heartwarming interaction with Sunil Singh, a distinguished Civil Engineering alumnus from the Class of 2016, at Bangalore airport. Now excelling at Amazon, Sunil expressed his gratitude to the university for its transformative impact on his career. This memorable meeting reflects the global success of Chitkara University alumni and their enduring connection with their alma mater.



CHITKARA







On December 13, 2024, Dr. Meenu Khurana, Pro Vice Chancellor of SOET, Chitkara University, attended the one-day workshop for Women Leaders: Shaping Academic Excellence for VIKSIT Bharat @ 2047, organized by the UGC at IIT Delhi. The event was inaugurated by Union Minister for Education, Shri Dharmendra Pradhan, and attended by various prominent figures, including Union Minister of State for Education Dr. Sukanta Majumdar, UGC officials, and experts from diverse fields. Eminent personalities like Smt. Lakshmi Iyer, Dr. Sonal Mansingh, and Prof. Preeti Aghalayam shared their insights on critical topics, focusing on the role of women leaders in shaping the future of higher education in India.

Dr. Meenu Khurana, Pro-Vice Chancellor (SOET), Chitkara University, HP was honored by the Ministry of Information and Broadcasting, Government of India, for her exceptional mentorship in the XR Creator Hackathon (XCH). The hackathon brought together developers from across India to explore augmented and virtual reality, fostering innovation and creativity. Selected solutions from the event will be showcased at the World Audio Visual and Entertainment Summit (WAVES) 2025, marking a significant contribution to immersive technology advancements.

The Tech Wrap, Volume 7 Issue 4 (October-December 2024)



The Tech Wrap, Volume 7 Issue 4 (October-December 2024)

aligned education, enabling certifications for 1,000+

students and training for 250+ through Infosys

Springboard.

was organized by IEEE R10 in association with Delhi

Section on September 27-29, 2024.



### **Received Membership of ACM**

The Tech Wrap, Volume 7 Issue 4 (October-December 2024)

Dr. Pradeepta Kumar Sarangi received best paper award in international conference Cyberation &

Computation



Dr. Pradeepta Sarangi received an appreciation certificate in QAHE-2024



Dr. Monika Parmar received reviewer certificate in conference ICAN-202





Chitkara University's Garba Night, celebrated with a three-day workshop, brought students together to embrace Navratri traditions, fostering community and cultural pride.



Chitkara University hosted a musical performance by Maestro Ms. Kala Ramnath and Pandit Mithlesh Jha, promoting Hindustani classical music and cultural heritage among students and faculty.

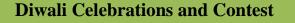
The Tech Wrap, Volume 7 Issue 4 (October-December 2024)



Chitkara University's Star Night, featuring Armaan Bedil, celebrated Punjabi music, enriching students' cultural experiences and fostering community appreciation.



Chitkara University's "Deepotsava - Lighting Lives" charity festival fostered a spirit of giving, featuring handcrafted items, activities, and donations to support NGOs.



### 29<sup>th</sup> October, 2024

UNIVERSITY



Students of SOET celebrated Diwali through a creative contest, showcasing artistic talents and fostering cultural appreciation and community spirit.



Chitkara University's "Stand-Up Comedy" event with Vijay Yadav delighted over 800 students, promoting laughter, mental well-being, and a vibrant campus community.







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