CHOUKSEY ENGINEERING COLLEGE

An ISO 9001:2015 Certified Institute

ESTABLISHED IN 2001 – EXCELLENCE IN TECHNICAL EDUCATION

"THE BYTE"

Bringing You Tech & Excellence

THE NEWSLETTER

THE PULSE OF FUTURE TECH

VOLUME 1 ISSUE-1

JULY - DECEMBER 2022

Department of

COMPUTER SCIENCE AND ENGINEERING

CHOUKSEY ENGINEERING COLLEGE, BILASPUR (CG)

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FROM THE DESK OF MANAGING DIRECTOR

DR. ASHISH JAISWAL

Managing Director,

Chouksey Engineering College, Bilaspur

The launch of "The Byte" marks a proud milestone for the Department of Computer Science and Engineering. Just as technology evolves through small yet meaningful steps, this newsletter reflects the ideas, energy, and innovation of our students and faculty. May this platform continue to inspire creativity and collaboration in the years ahead.

I am delighted to witness how our academic community is aligning itself with emerging global trends in computing, artificial intelligence, and digital transformation. The diverse academic, technical, and co-curricular activities showcased in this edition truly highlight the holistic development of our learners, who are preparing themselves to be the leaders and innovators of tomorrow.

I extend my heartfelt congratulations to the editorial team for their thoughtful curation and commendable effort. I encourage everyone to continue nurturing a culture of curiosity, collaboration, and excellence. May The Byte grow into a vibrant platform that inspires ideas, celebrates achievements, and strengthens the identity of our department for years to come.

"In every byte of knowledge lies the power to transform the future."

FROM THE DESK OF PRINCIPAL

DR. K. C. MAHAJAN

Principal
Chouksey Engineering College, Bilaspur

It is a matter of great pleasure to learn about the launch of the first edition of the Department of Computer Science and Engineering newsletter, "The Byte." This initiative reflects the department's commitment to academic excellence, innovation, and effective communication.

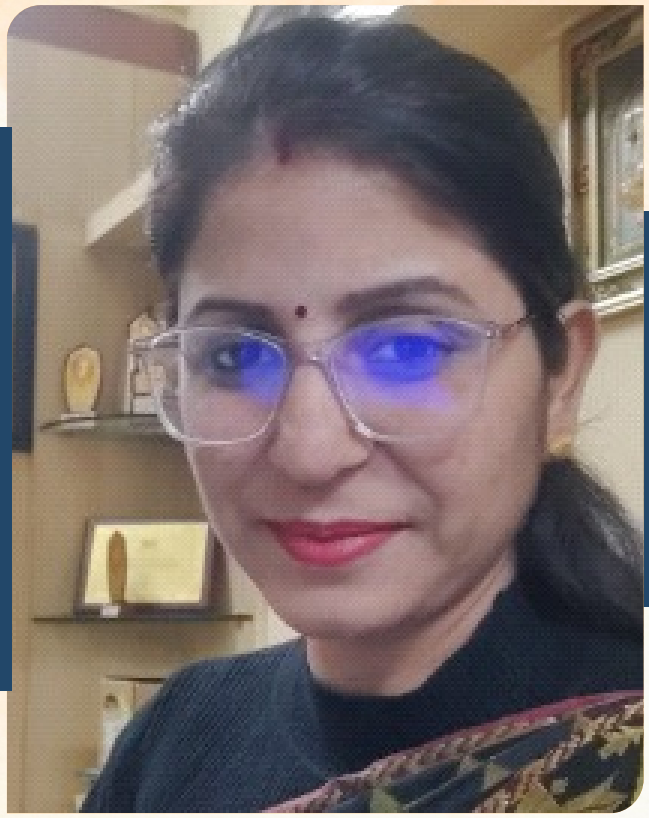
A newsletter is much more than a collection of pages; it is a mirror of the intellectual, creative, and technical growth of the department. The Byte beautifully captures the diverse academic achievements, research initiatives, technical events, and co-curricular activities undertaken by our students and faculty members. It is encouraging to see such enthusiasm, teamwork, and dedication being transformed into a meaningful platform for expression and knowledge-sharing.

In an era where technology is advancing at an unprecedented pace, platforms like The Byte play a crucial role in nurturing curiosity, encouraging lifelong learning, and strengthening the spirit of collaboration. I am confident that this newsletter will inspire both present and future learners to strive for excellence and remain at the forefront of innovation.

I appreciate the editorial team, faculty coordinators, and students for their sincere efforts in making this first edition a success. I wish the department continued growth, creativity, and many more impactful editions in the future.

Best wishes for a successful beginning.

FROM THE DESK OF HEAD OF DEPARTMENT



DR. SHANU K RAKESH

Head of Department (HOD)

Computer Science & Engineering

Chouksey Engineering College, Bilaspur

It gives me immense pleasure to present the inaugural edition of the Department Newsletter, "The Byte", of the Department of Computer Science and Engineering. This publication is not merely a record of events; it is a reflection of our collective journey, capturing the spirit of innovation, dedication, and achievement that defines our department.

Over the past months, the department has continued to uphold its tradition of excellence through a diverse range of academic and co-curricular initiatives, including industrial visits, project presentations, NPTEL certifications, technical workshops, the Internal Smart India Hackathon, and impactful research activities. Alongside academic pursuits, our campus life has been enriched by vibrant celebrations such as Saawan Somwar, Independence Day, Garba Night, Teacher's Day, and Children's Day—strengthening unity and cultural engagement among students and faculty alike.

Our students have consistently demonstrated remarkable creativity, technical competence, and innovative thinking, while our dedicated faculty members have remained steadfast in mentoring, guiding, and inspiring them toward holistic development. Together, we continue to navigate the dynamic and ever-evolving landscape of computer science—where learning, technology, and ideas advance at an extraordinary pace.

I extend my heartfelt appreciation to the editorial team, contributors, and all those who played a vital role in bringing this edition to life. I encourage every reader to explore these pages with curiosity and enthusiasm, and to find inspiration to learn, innovate, and excel.

"Code is the language, but creativity is the true power behind every innovation."

EDITORIAL COMMITTEE

FACULTY COORDINATOR

Chief Editor

DR. SHANU K RAKESH

(HOD, CSE)

Editor

MR. NILESH GUPTA

STUDENT COORDINATOR

Editor

HARSHA CHAK

Co-Editor

ABHIJIT BISWAS

CHOUKSEY ENGINEERING COLLEGE, BILASPUR

VISION AND MISSION OF THE INSTITUTE

VISION

To be a leading technical institute of National and International repute, providing quality education and to produce technically competent, ethical and socially responsible professionals

MISSION

- To provide students with the best possible inputs through faculty, infrastructural facilities and opportunities by the best available means.
- To produce best engineers and managers with the sense of duty to humanity and a commitment to their society and country.
- Producing technically skilled manpower to meet the unique needs of industries that forge new paths, develop new products and come up with innovative solutions
- To prepare students to be eligible for placement in PSUs/Government Sectors/MNCs/Private Sectors.

DEPARTMENT COMPUTER SCIENCE AND ENGINEERING

VISION AND MISSION OF THE DEPARTMENT

VISION

To emerge as a centre of excellence in the field of Computer Science and Engineering education, and to produce technically competent, socially responsible professionals to cater the needs of industry and society.

MISSION

- To provide best possible educational facilities for teaching & learning process to computer science and engineering students for building a promising career.
- To produce best Computer Science Engineers with personal and professional skills and responsibilities to cater the needs of Industry, Government and Society.
- To create ambient environment in which core competency in the field of computer science & engineering along with research can be enhanced.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.

ABOUT THE DEPARTMENT

The Department of Computer Science & Engineering (CSE) at Chouksey Engineering College, Bilaspur, established in 2001, is one of the earliest and most dynamic CSE departments in the district. Over the years, it has grown into a hub of innovation, creativity, and technical excellence, integrating the fields of Computer Engineering and Computer Science to prepare students for the ever-evolving technology landscape.

With a vision to produce globally competent professionals, the department offers B.Tech and M.Tech programs in Computer Science & Engineering, enabling students to specialize in cutting-edge areas such as software development, artificial intelligence, data science, cybersecurity, and other emerging technologies. With its interdisciplinary nature and global relevance, the CSE discipline equips graduates to become leaders of Industry 4.0 and beyond.

Guided by a strong team of experienced faculty with rich industry and research backgrounds, and supported by state-of-the-art laboratories and a research-driven environment, the department emphasizes holistic student development. Students are actively engaged in projects, hackathons, workshops, industrial training, off-campus selection programs, and community-driven initiatives, ensuring a seamless connection between classroom learning and real-world applications.

The department attracts high-quality students from across Central India and maintains an impressive placement record. Many graduates have joined leading IT companies, or pursued higher education from top IITs and NITs, launched startups, reflecting the department's commitment to academic excellence and lifelong learning.

Our curriculum is designed with flexibility for advanced specializations, encouraging students to explore diverse domains through a wide range of research projects, internships, and industry collaborations. In addition to imparting effective education and enhancing the teaching–learning process, the department also focuses on the overall personality development of students, fostering confidence, leadership, and innovation.

Fully equipped to meet the dynamic challenges of the 21st century, the Department of Computer Science & Engineering continues to play a key role in shaping modern education by providing unique opportunities at the forefront of computer engineering and its applications.

ARTICLE BY FACULTY

DR. SHANU K. RAKESH

Head,
Department of Computer Science & Engineering

Swarm Intelligence & Swarm Robotics: Revolutionizing Collective Intelligence

"Exploring the Future of Collective Artificial Intelligence"

In the ever-evolving field of Artificial Intelligence, Swarm Intelligence (SI) and Swarm Robotics (SR) are emerging as groundbreaking paradigms inspired by the collective behavior of social organisms such as ants, bees, and birds. These natural systems demonstrate how simple individuals, following basic rules and without centralized control, can produce highly intelligent and adaptive group behavior.

Swarm Intelligence refers to the collective problem-solving capabilities that emerge from the cooperation and self-organization of decentralized agents. Algorithms such as Ant Colony Optimization (ACO), Particle Swarm Optimization (PSO), and Artificial Bee Colony (ABC) have shown exceptional efficiency in solving complex computational problems involving optimization, routing, and resource allocation.

Building upon this foundation, Swarm Robotics extends these principles into the physical world. In this field, multiple autonomous robots collaborate to achieve a common goal—such as search and rescue operations, environmental monitoring, precision agriculture, and space exploration. The strength of swarm systems lies in their scalability, robustness, and fault tolerance, making them ideal for environments where individual robot failure is inevitable but system success depends on collective resilience.

The synergy of Artificial Intelligence, Machine Learning, and Robotics is now enabling these swarms to learn, adapt, and make decentralized decisions in real time. Future applications could include intelligent disaster management systems, autonomous delivery networks, and smart traffic coordination, transforming the way machines interact and cooperate in dynamic environments.

Swarm intelligence not only demonstrates the power of collaboration in nature and machines but also reflects an essential human lesson: together, we are smarter than any one of us alone. It reminds us that progress thrives in unity, innovation, and shared intelligence — the same values we aim to nurture among our students and researchers at Chouksey Engineering College.

ARTICLE BY STUDENTS

SHRISHUBH SHUKLA

7th Semester (CSE)

Integrating Machine Learning and Deep Learning: A Convergent Framework for Intelligent Systems

The evolution of Artificial Intelligence (AI) is profoundly influenced by two closely related paradigms—Machine Learning (ML) and Deep Learning (DL). While these fields are often perceived as distinct, they are deeply interconnected, sharing a common objective of enabling computational systems to learn autonomously from data. Machine Learning provides the theoretical and algorithmic groundwork, whereas Deep Learning extends this foundation by introducing hierarchical representations capable of capturing complex, nonlinear relationships.

Machine Learning encompasses a broad spectrum of algorithms, including support vector machines, random forests, and ensemble approaches, designed to recognize patterns and make predictions. Its strength lies in its mathematical transparency, adaptability, and effectiveness with structured data. However, conventional ML models rely heavily on manual feature extraction, which constrains their ability to handle unstructured and high dimensional inputs such as images, audio, or natural language.

In contrast, Deep Learning, a specialized subset of ML, addresses these challenges by employing multi-layered artificial neural networks. These architectures—such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Transformers—enable automatic representation learning, allowing the system to identify and refine features directly from raw data. This self-learning capability represents the key distinction between ML and DL: while ML optimizes predefined features, DL learns to generate them hierarchically, resembling certain cognitive processes of the human brain.

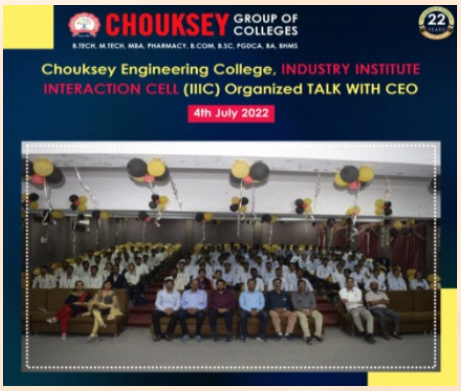
Nevertheless, Deep Learning also inherits some challenges from traditional ML frameworks, including overfitting, high computational demands, and limited interpretability. To overcome these issues, recent research emphasizes the integration of classical ML concepts—such as regularization, probabilistic modeling, and explainability—into deep architectures. This convergence has led to the development of hybrid and interpretable models, including probabilistic neural systems and meta-learning frameworks, which combine the robustness of ML's statistical grounding with DL's datadriven adaptability.

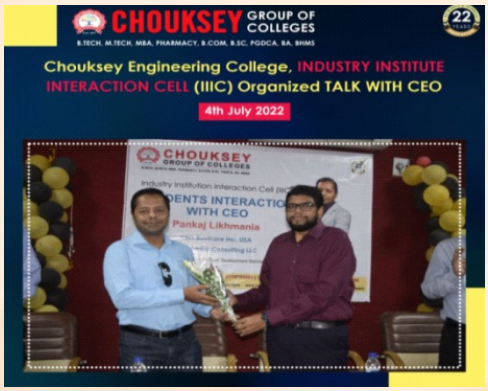
Ultimately, the relationship between Machine Learning and Deep Learning represents a continuum of computational intelligence rather than a separation of approaches. ML offers methodological rigor and theoretical stability, while DL contributes scalability and perceptual depth. The future of AI research lies in harmonizing these paradigms to create models that not only learn efficiently from vast datasets but also reason transparently, generalize across domains, and justify their decisions. This synthesis marks a pivotal step toward the realization of explainable, adaptive, and human-aligned intelligent systems.

DEPARTMENT ACTIVITIES

Chouksey Engineering College, (IIIC) organized “Students Interaction with CEO” on 04.07.2022

Chouksey Engineering College, through its Industry–Institute Interaction Cell (IIIC), organized a valuable programme titled “Students Interaction with CEO” on 04.07.2022, providing students with a rare opportunity to engage directly with an industry leader. The session offered deep insights into real-world professional expectations, leadership qualities, and the importance of innovation in today's competitive environment.





Tree Plantation By NCC Cadets at the Campus of Chouksey Group of Colleges on 04.07.2022

A tree plantation drive was organized by the NCC cadets at the campus of Chouksey Group of Colleges on 04 July 2022, reflecting their strong commitment to environmental protection and sustainable living. With great enthusiasm and discipline, the cadets planted saplings across the campus, symbolizing hope for a greener and healthier future.

“On the occasion of “Azadi ka Amrit Mahotsav”, Chouksey group of Colleges celebrated *Har Ghar Tringa* program,on 8/8/2022

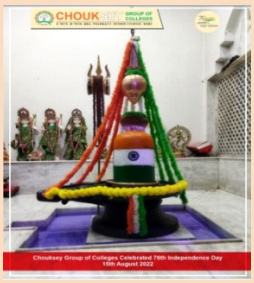
“On the occasion of Azadi ka Amrit Mahotsav, the Chouksey Group of Colleges proudly celebrated the Har Ghar Tiranga program on 8th August 2022, an initiative enthusiastically led by the NSS unit students. The event aimed to honor 75 years of India's independence and evoke a deep sense of patriotism among students and staff.

“Celebrated Sawan Somwar on 25th August 2022”

Chouksey engineering Colleges celebrated Saawan Somwar on 25th August 2022 beautifully showcased the blend of culture, faith, and unity. The active participation of the CSE Department, including both students and faculty, reflected how traditions can bring people together beyond academics.

“Celebrated 75th Independence” Day on 15th August 2022

Chouksey Engineering Colleges celebrated the 75th Independence Day on 15th August 2022.It was a proud and patriotic occasion filled with enthusiasm, unity, and respect for the nation. The active participation of the CSE Department added to the spirit of the day, as students and faculty came together to honor the sacrifices and achievements that shaped India's freedom. The flag hoisting ceremony, symbolizing national pride and reverence for the tricolor, followed by inspiring speeches from esteemed guests that reminded everyone of India's journey and responsibilities as citizens. The NCC parade displayed discipline, courage, and dedication, embodying the essence of true patriotism.

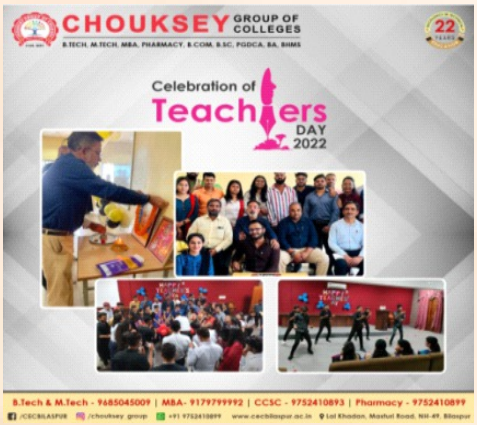


“Birthday Celebration of Our Managing Director Sir on 27th August 2022”

Birthday Celebration of Respected Managing Director of Chouksey Group of Colleges, Ashish Jaiswal Sir | 27th August 2022

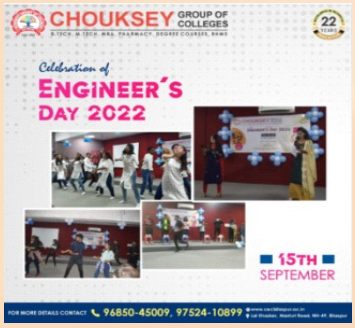
“Teacher's Day celebration” on 5th September 2022”

The Chouksey Engineering Colleges joyfully celebrated Teachers' Day on 5th September 2022 with immense enthusiasm and gratitude. Students from the CSE Department took the lead in organizing a memorable event to honor the invaluable contributions of their respected faculty members. The celebration was filled with cultural performances, fun activities, and heartfelt speeches, reflecting the deep respect and affection students hold for their mentors. The event beautifully highlighted the vital role teachers play in shaping young minds and guiding them toward excellence. It was a day filled with appreciation, joy, and a renewed sense of connection between students and teachers.



“Engineer's Day Celebration” on 15th September 2022

Chouksey Engineering Colleges celebrated the 75th Independence Day on 15th August 2022.It was a proud and patriotic occasion filled with enthusiasm, unity, and respect for the nation. The active participation of the CSE Department added to the spirit of the day, as students and faculty came together to honor the sacrifices and achievements that shaped India's freedom. The flag hoisting ceremony, symbolizing national pride and reverence for the tricolor, followed by inspiring speeches from esteemed guests that reminded everyone of India's journey and responsibilities as citizens. The NCC parade displayed discipline, courage, and dedication, embodying the essence of true patriotism.

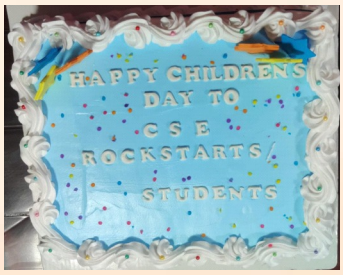


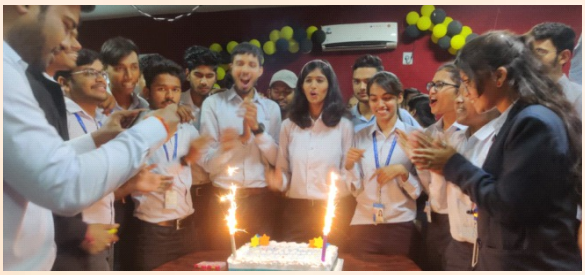
“Chouksey Dandiya Eve Celebration” on 30th September 2022

Chouksey Engineering College celebrated Dandiya Eve on 30th September 2022, was an evening filled with color, rhythm, and joy. The CSE Department took the lead in organizing a vibrant Dandiya Eve at the college ground, bringing together students and faculty in a celebration of tradition and togetherness. The event was a beautiful blend of music, dance, and festive spirit, as participants dressed in colorful traditional attire and swayed to the lively beats of Dandiya. The energetic performances and enthusiastic participation reflected the unity, creativity, and cultural vibrancy of the department.

“Children's Day Celebration” on 14th November 2022

"Children's Day Celebration" organized by the Department of Computer Science and Engineering (CSE) on November 14, 2022, was a heartwarming and memorable event that brought together students, faculty, and young minds for a day of joy and learning. The CSE department aimed to inspire and encourage the children, introducing them to the exciting world of technology and innovation through fun and engaging activities.





“Chouksey Engineering College, IIC 5.0 organized a POSTER COMPETITION on 2nd Dec 2022”

“Chouksey Engineering College, under IIC 5.0, organized a Poster Competition on 2nd December 2022, creating an inspiring platform for students to showcase their creativity, innovation, and problem-solving perspectives. The event encouraged participants to express their ideas visually on themes related to technology, entrepreneurship, and societal development.

“Chouksey Engineering College organized Organized Graffiti Competition on 5th Dec 2025

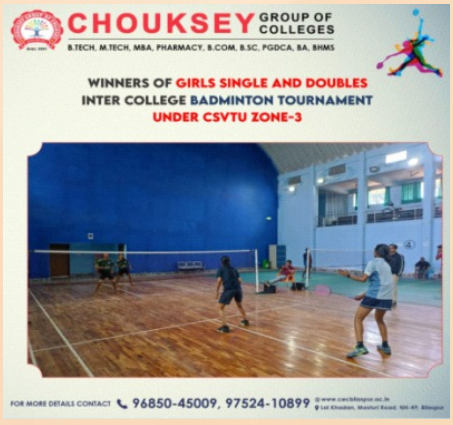
“Chouksey Engineering College organized a Graffiti Competition on 5th December 2022, creating a vibrant platform for students to express their creativity through colors, art, and imagination. The event transformed blank spaces into powerful visual stories, as participants used graffiti to depict themes of innovation, culture, and social awareness. It encouraged students to think freely, experiment with artistic techniques, and convey meaningful messages through their artwork.

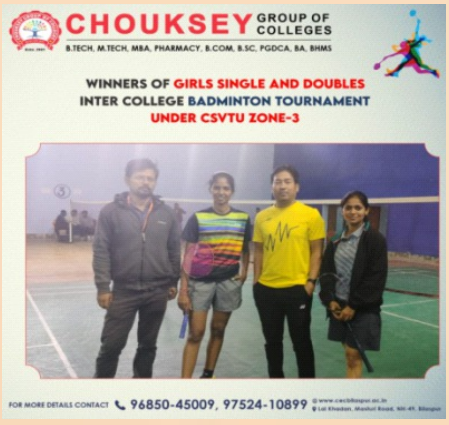
“Chouksey Engineering College Organized VIMARSH-2K22 Multidisciplinary International Conference On 16-17 December 2022”

Chouksey Engineering College proudly organized VIMARSH-2K22, Multidisciplinary International Conference on 16–17 December 2022, a vibrant and inspiring technical fest sponsored by ISTE. The event served as a powerful platform for us to showcase our creativity, innovation, and technical skills through various competitions, workshops, and interactive sessions. VIMARSH-2K22 not only encouraged intellectual growth but also fostered teamwork, leadership, and a spirit of healthy competition among participants. With enthusiastic involvement from us and support from ISTE, the fest became a memorable celebration of knowledge, technology, and youthful energy—marking a significant milestone in the institution's journey towards academic and professional excellence.

“Single and doubles Inter College Badminton tournament under CSVTU Zone-3”

Chouksey Engineering Colleges brought pride and glory to the institution by winning prizes in both Singles and Doubles categories of the Inter College Badminton Tournament under CSVTU Zone–3.Their outstanding performance showcased not only their athletic skill and determination but also the college's commitment to encouraging excellence beyond academics. Congratulations to all the winners for their remarkable achievement and for representing the spirit of sportsmanship, teamwork, and dedication.





FACULTY ACHIEVEMENT

RESEARCH AND DEVELOPMENT:

- Dr.Shanu Kuttan Rakesh, Dr. Rupali Vishwakarma Dohare, Dr. Abhilasha Sharma, Priyanka Singh, Dr. Ram Bhushan,"Artificial Intelligence Enabled secure Block Chain for Healthcare System" Indian Patent No. 202211048964filed on date26-08-2022 and published on date 02-09- 2022.

- Pranoy Das, Shanu K Rakesh, "Digital Parking system using QR", Vimarsh-2k22 Multidisciplinary International Conference (2022), Chouksey Group of Colleges, Bilaspur, 16-17 December 2022, [ISBN 978-81-947143-0-9].

- Saniya Khan, Shanu K Rakesh, "Design and Analysis of electric vehicle speed limit control using wireless network", 2022 USTM-AIMT SUMMER International Conference on Innovations in Management Science and Technology (ICIRMST), August 05-06 2022 organised by University of Science and Technology, Meghalayapublished in American Institute of Management and Technology Conference Proceedings(AIMTCP) Vol-2 No. 2, 2022, pp: 78-81, [ISSN: 2769-5093 (online)].

- Shalinee Singh, Shanu K Rakesh, "INTEND AND INVENTION OF MEDICINE DELIVERANCE ROBOTS FOR HOSPITALS", 2022 USTM-AIMT SUMMER International Conference on Innovations in Management Science and Technology (ICIRMST), August 05-06 2022 organised by University of Science and Technology, Meghalaya published in American Institute of Management and Technology Conference Proceedings (AIMTCP) Vol-2 No. 2, 2022, pp: 78-81, [ISSN: 2769-5093 (online)].

- Mr. Nilesh Gupta, Research paper named "Design and analysis of street dust cleaning" present and Presented in VIMARSH 2K22 Chouksey Engineering College, Bilaspur Dec 2022.

- Mr. Vinay Pandey, An optimized deep learning Technique for detection of brain tumors- A Review in VIMARSH 2K22 :MULTIDISCIPLINARY INTERNATIONAL CONFERENCE held at 16 -17 th December 2022at Chouksey Engineering college, Bilaspur(CG)

- Mrs.Pratibha Sao, "Based on security techniques preparing Hybrized model for data security" in VIMARSH 2K22: Multidisciplinary International conference 16-17 Dec 2022 at Chouksey group of college bilaspur (CG).

- Neha Patnaik, "Based on security techniques preparing Hybrized model for data security" in VIMARSH 2K22: Multidisciplinary International conference 16-17 Dec 2022 at Chouksey group of college bilaspur (CG).

- Neelam Thakur, "Based on security techniques preparing Hybrized model for data security" in VIMARSH 2K22: Multidisciplinary International conference 16-17 Dec 2022 at Chouksey group of college bilaspur (CG)

- Jyoti Kansari , "Malaria Detection from Blood Cell Images using Convolution Neural Network Model" , International Journal of Research in Engineering and Science (IJRES), Volume 10, Issue 7, pp: 882-888 July-2022 [ISSN Number: 2320-9364], link:https://www.ijres.org/papers/Volume-10/Issue-7/1007882888.pdf

FDP/STP/TTP/WORKSHOP:

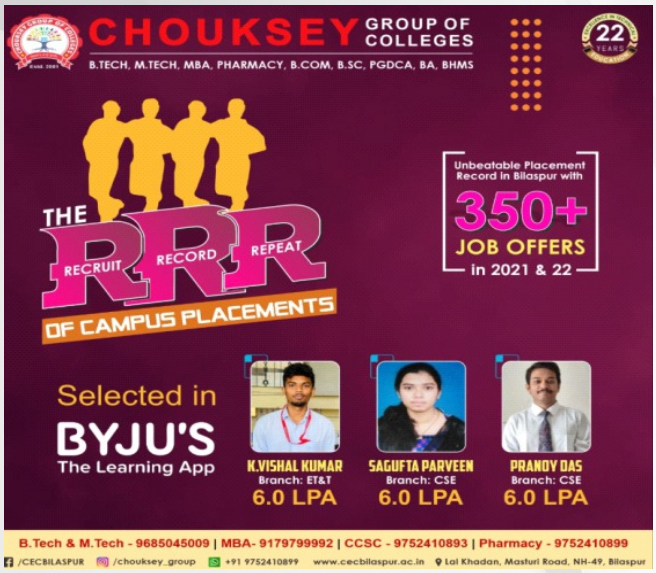
- V. S. Kharsan, "Recent Trends in AI, Machine Learning, and Data Science," FDP, SVKM Institute of Technology, Dhule, Dec. 26–31, 2022.

- Neha Patnaik, One day NPTEL Awareness Workshop (In-Person) conducted on 22 December 2023 by IIT Madras, in association with Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)

- Jyoti Kansari, IP Awareness/Training program under "NATIONAL INTELLECTUAL PROPERTYM AWERENESS MISSION" on July 22, 2022.

STUDENTS ACHIEVEMENTS

CAMPUS PLACEMENTS HIGHEST PACKAGE ACHIEVERS

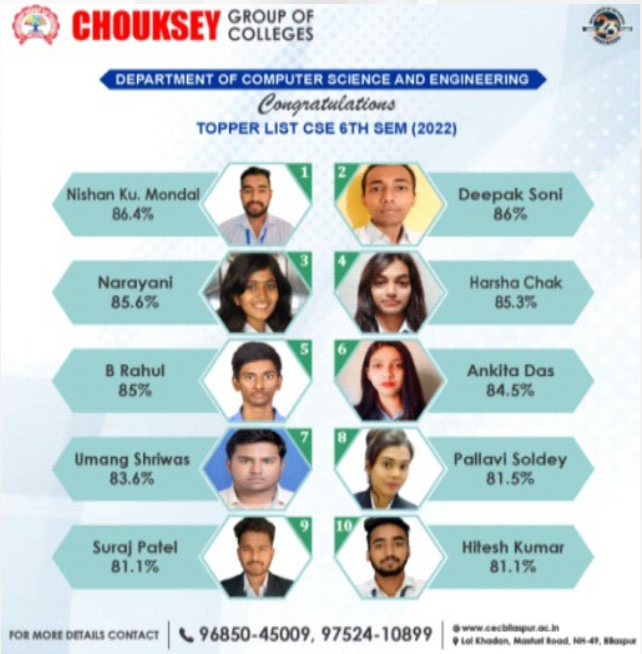


SPORTS ACHIEVEMENTS

CSE DEPARTMENT TOPPERS

4TH SEM CSE TOPPERS

6TH SEM CSE TOPPERS



STUDENTS QUALIFIED NCC 'C' CERTIFICATE EXAMINATION

Our students who have earned NCC “C “ Examination Certificate which is a result of their extreme hard work and dedication towards being the best at what they do with all their heart and soul.

SR. NO	STUDENT NAME	BRANCH	CERTIFICATE	YEAR
1	Mr. Aman Kumar Kashyap	CSE	NCC ‘C’ Certificate	2022
2	Mr. Suraj Patel	CSE	NCC ‘C’ Certificate	2022
3	Mr. Prakhar Jaiswal	CSE	NCC ‘C’ Certificate	2022
4	Mr. Aman Kumar Kashyap	CSE	NCC ‘C’ Certificate	2022
5	Mr. Suraj Patel	CSE	NCC ‘C’ Certificate	2022
6	Mr. Prakhar Jaiswal	CSE	NCC ‘C’ Certificate	2022

STUDENTS QUALIFIED NCC 'B' CERTIFICATE EXAMINATION

SR. NO	STUDENT NAME	BRANCH	CERTIFICATE	YEAR
1	Mr. Lalit Kumar Ganda	CSE	NCC ‘B’ Certificate	2022
2	Mr. Loknath Yadav	CSE	NCC ‘B’ Certificate	2022
3	Mr. Kajal Chauhan	CSE	NCC ‘B’ Certificate	2022

STUDENTS CORNER

ART WORK BY SHUBHAM KESHARWANI

(Student of B.Tech 5th semester CSE)

A beautiful piece of artwork by our beloved student, representing a lot of his aspects in one single picture. Beautiful picture presents his creativity, hard work, patience and imagination.

THE NEWSLETTER

THE PULSE OF FUTURE TECH

DEPARTMENT OF

CSE

COMPUTER SCIENCE & ENGINEERING

VOLUME 1 ISSUE 1

JULY-DECEMBER 2022

CONTACT FOR ADMISSION

82182-38282

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