



DEV BHOOMI
—UTTARAKHAND—
UNIVERSITY



NE X GEN

A NEWSLETTER

VOL 4, ISSUE-1, Nov 22-Jan 23

**SCHOOL OF
ENGINEERING AND COMPUTING**

"All the latest from CSE"



Student Editorial Team:

Sujay Kumar - B.Tech CSE 3rd Year
Rishabh Tyagi - B.C.A. 1st Year
Satyam Chaurasia - B.Tech 2nd Year
Khushi Aggarwal - B.C.A. 3rd Year
Amarkant - B.Sc. IT 1st Year
Arihant - B.Tech CSE 2nd Year

Editor in Chief : Dr. Ritika Mehra
Editor : Ms. Urvashi Rawat
Mr. Mukesh Rajput

Message from **Chancellor**



Mr. Sanjay Bansal
Chancellor, DBUU

Globally, the Computer Science landscape has undergone a dramatic paradigm shift and impressive expansion. School of Computing & Engineering at Dev Bhoomi Uttarakhand University is prepared to face the challenges of the growing demand of the industry. This is due to shift toward interdisciplinary studies, research-based, interactive learning, and technological integration offered by SoEC that has produced a variety of opportunities and challenges. SoEC has been set the path for publishing their newsletter, which includes information about the activities carried out by CSE and CA departments. It is a wonderful endeavor that improves the showcase events and columns. I hope student and faculty editorial team to continue on the path for taking the initiative and offering a valuable insight. Congratulation to the student and faculty editorial team of Nexgen for taking the initiative and offering a valuable insight of all activities of SoEC.



Dr. Preeti Kothiyal
Vice-Chancellor, DBUU

Message from **Vice-Chancellor**

I would like to congratulate Dr. Ritika Mehra and her entire team for organizing more than fifteen events every semester that include National and International events which are necessary for the overall development of our students. Such events provide a variety of experiences to the students and inculcate skills such as leadership and team spirit that are helpful in their overall career development. This adds enthusiasm and energy to the dynamic campus culture environment. The Newsletter is a testimony to all the quality, teaching and research happening in SoEC. Team NEXGEN brings out the compilation which I look forward to discover how well our students are learning and growing in this educational journey with us. I am confident that SoEC will reach greater heights of excellence and attract more students from other parts of the world. Congratulations to the Editorial team and I wish them luck.



Dr. Ritika Mehra
Dean, SoEC

Message from **Dean's Desk**

I would like to introduce the latest edition of the Newsletter "NEXGEN". It is our constant effort to provide the latest information of CSE and CA departments with diverse activities, be it innovation, technology or skill enhancement. I believe that the newsletter will serve as a window through which the complete profile of the academic and co-curricular activities, achievements and progress made during the stipulated period can be viewed. The faculty members are constantly publishing technical papers in national and international journals and conferences. The School is fortunate to have dedicated faculties, devoted students, and committed supporting staff that works hard to offer our students a stimulating and encouraging atmosphere. Details of recent events held on campus are also reported. Training and Placement statistics for the last pass-out batch have also been presented. I hope you will enjoy reading this issue!!!



Patent Filled



▶ Dr. Sangeeta Pant has filled a patent on “Plant Leaf Disease Diagnosis using Transfer Learning Approach ”with Patent Application Number: TEMP/E-1/83406/2022-DEL, Published Date: 20 December 2022.



▶ Dr. Shweta Sachdeva has filled a patent on Title” Artificial Intelligence and IoT based Automatic Smart Healthcare Monitoring system to monitor health for pet animals and birds using AI camera, WSN, cloud and Deep learning algorithms Patent Application Number: 202241068398A Published Date: 02 December 2022.

Research Articles Published/ Accepted in Journals

S.No.	Employee Name	Title of Paper	Journal Name	Publisher	Year
1	Dr. Upendra Kumar Verma	Charge transport in Quantum Dot Sensitized Solar Cells : A Mathematical Model	Solar Energy	Elsevier	October 2022
2	Dr. Ritika Mehra	Detecting the risk of COVID-19 spread in near real-time using social media	Emergency Management	Springer Nature	Jan 2023 (In Press)
3	Dr. Sangeeta Pant	Analytical Hierarchy Process for Sustainable Agriculture : An Overview	MethodsX	Elsevier(Scopus/ WoS indexed, Q2, SJR- 0.39, Cite Score- 2.8)	December 2022
4	Dr. Ritika Mehra	Predictive Modeling of Stress in the Healthcare Industry During COVID-19: A Novel Approach Using XGBoost, SHAP Values, & Tree Explainer	International Journal of Decision Support System Technology (ESCI)	IGI Global	January 2023

Authored Books/Edited Books

S.No.	Employee Name	Publication Type	Book Type	Title of Paper	Publisher	Year
1	Dr. Sangeeta Pant	International	Authored Book	DevOps: A Journey from Microservice to Cloud Based Containerization	River Publisher	2022-23
2	Dr. Sangeeta Pant	International	Authored Book	Metaverse: A Technical Shift from 3D Gaming to Virtual World	River Publisher	Book Proposal Under Review
3	Dr. Ritika Mehra	International	Edited Book	Computational Intelligence and Smart Communication	Springer Nature	December 2022

Conference Paper

S.No.	Employee Name	Publication Type	Title of Paper	Conference Name	Publisher	Year/Status
1	Mr. Rakesh Arya	International	An empirical assessment of wireless communication	International Conference on Computing for Sustainable Global Development	IEEE	Accepted Dec. 2022
2	Dr. Sangeeta Pant	International	Evolutionary Algorithm-based Approach for Multi-Objective Optimization of a Complex Reliability System	River Conference Proceeding	River Publisher	December 2022
3	Mr. Pankaj Pratap Singh, Mr. Arif Ali	International	Enhancing QoS of Network traffic based on 5G Wireless Networking Using Machine Learning Approaches	ICCISC 2022	Springer	December 2022
4	Dr. Sangeeta Pant	International	Multi-Objective Optimization of Complex Bridge Network by MOPSO-CD	2022 International Conference on advances in Computing, Communication and Materials (ICACCM)	IEEE (Scopus indexed)	November 2022

Workshops

OpenCV using Python

One day Workshop on **OpenCV using Python** was conducted by Mr. Khushal Pathak - Sr. Software Engineer (VerveGen Tech. Pvt. Ltd.) on 22nd Nov 2022. The session was useful and knowledgeable with hands-on session which helped our students to expertise in Python and its applications. This session gave an insight on the utilization of Python programming as its high demand skill required for growing IT Industry.



E-Certification on Amazon Web Services Cloud

Workshop with E-Certification on **Amazon Web Services Cloud** 03-Nov-2022 by Mr. MD. Tauhid Raza, AWS Cloud Engineer, Mind Square Technologies Pvt. Ltd. Bengaluru.

“AWS Discovery Day and NASSCOM Cyber Security Day”



The Department of Computer Science & Engineering had organized a seminar on **AWS Discovery Day and NASSCOM Cyber Security Day** on 9 Dec 2022. This session was delivered by Mr. Dheeraj Madhukar- Application Security Engineer & Cyber Security Expert and NighatNaaz Ansari- Senior Technical Trainer (AWS) Amazon Authorized Instructor (AAI).

A Sneek peek into future Business & Technology

The Department of Computer Science & Engineering organized a seminar on **“A Sneek peek into future Business and Technology”** for B.Tech 1st year students on 3rd Jan 2023. Mr. K. Narayanan (Deputy Director General/Scientist G NIC), Dehradun, Uttarakhand was invited as speaker to share his thoughts on Future Business and Technology.



Seminars

Guest Lecture



IOT and Edge Computing: Concepts and Case Studies

A Guest lecture on **“IOT and Edge Computing: Concepts and Case Studies”** was delivered by Dr. Peddoju Sateesh Kumar, Associate Professor, IIT Roorkee on 21 Nov 2022. The lecture focuses on actionable insights and to apply knowledge on data across a broad range of application domains. It also focuses on the scientific methods, processes, algorithm, and systems to extract knowledge and insights from noisy, structured, and unstructured data.

BEBO Technology, Chandigarh

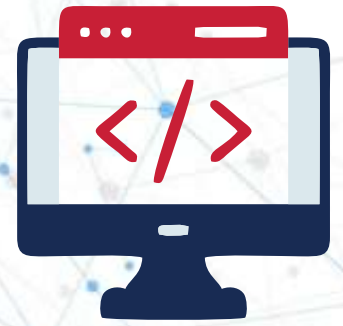


Industrial Tour

An Industrial visit to **BEBO Technology, Chandigarh** was organized for B.Tech 3rd Year Students. The pragmatic approach was elaborated by the Experts of Bebo Technology where they gave an insight to students on how to crack an interview and what skills are sought by the recruiters. This enhanced learning experience helped our students to expand networking opportunities and employability skill.



C ompetition



Padmavyuh Hackathon 1.0

School of Engineering and Computing organized a **2-Day Hackathon Padmavyuh 1.0** on 17th & 18th November 2022 at Dev Bhoomi Uttarakhand University Campus with more than 151 students registered as 52 teams. Students from B.Tech (CS), MCA, BCA, BCA Data Science & Animation, B.Sc IT had participated. In First Round, three out of four problems were given to be attempted by the participants. Time allotted to solve problems was 4 hours (Internet not Provided to participants). Winner of first Round got 50 marks out of 60. Ten Teams qualifies for second round. Two out of three problems were to be attempted by the participants. Time allotted to solve problems was 5 Hours (Internet was Provided to participants). Winner of Second Round attain 37 marks out of 40. Cash Prize money for Winner, 1st Runner up and 2nd Runner up was Rs. 10,000, Rs. 2100 and Rs. 1100. Team Unbeaten was declared as Winner (Nischal Gurung, Toran Jain, Bhanu Goel). 1st Runner was Team Mind Hack Zombies (Mohd. Arham Khan, Sandeep Singh Banoula, Pankaj Singh Negi, Anas Saifi) and 2nd Runner up was Team Finisher (Harshit Agarwal, Sanskar Gahlaut).



CONGRATULATIONS!



Students of School of Engineering & Computing (B.Tech 2nd Year & 3rd Year) has participated and secured 2nd position in National level Hackathon organized by College of Engineering, Roorkee on 18th-19th Nov. 2022 under the Mentorship of Ms. Ranjana Devli.



Dr. Ritika Mehra, was invited as Resource Person for Faculty development Program (FDP) on Data Science in collaboration with IRDT sponsored by AICTE ATAL Academy and delivered lecture session on “Deep Learning and Machine learning Techniques for the diagnosis of Diseases” on 13 Dec 2022.

Ms. Urvashi Rawat was invited as a delegate to seventeenth edition of its flagship conference, the Annual Information Security Summit (AISS) on 20, 21 and 22 December 2022 at Hotel Leela Ambience, Gurgaon (Delhi NCR) hosted by DSCI & NASSCOM. The Annual Information Security Summit has had the privilege of being touted as a truly Industry led Cyber Security conference which considers the breadth as well as the depth of the Cyber Security ecosystem of the country and beyond.



Dr. Ritika Mehra received WCISE'22 International Awards for Academic Leadership at Bangkok (World Conference on Innovations in Management, Science and Engineering), December 29-30, 2022, Organized by: Embedded Technologies [A Micro Enterprises under the aegis of MSME, Government of India]

Welcome Dr. Sandip Vijay, Chief Auditor (Academics & Research)



Dev Bhoomi Uttarakhand University is on a fascinating path of growth and development. As you are aware, it has already established itself as one of the top technological & professional university of Dehradun, but this is just the tip of the iceberg compared to the huge initiatives and progress the University is making. Dev Bhoomi Uttarakhand University is committed to impart holistic education in sync with the paradigm shifts in the job space. Our incorporated modules of value guidance, strong training and personality development programs, recreational activities and sports extravaganza, pragmatic industrial cum study visits, rigorous scheduling enhancement skills, and a host of job-oriented interactive activities are all part of the DBUU agenda of its ambitious students' all-round development.

INTERNATIONAL SYMPOSIUM

on Recent Trends in Emerging Technologies 2022



INTERNATIONAL SYMPOSIUM

on

RECENT TRENDS ON EMERGING TECHNOLOGIES 2.0



Dr. Phayung Meesad

Associate Professor,
Department of IT & Management,
Faculty of IT and Digital Innovation,
KMUTNB, Bangkok,
Thailand.



Mohammed Abubakar

Lecturer, Department of I.T,
Modibbo Adama University
Yola Nigeria,
Federal Government University



Prof. O.P. Vyas

Visiting Professor
(Univ. of Bielefeld-Germany)
Dean (Technology Development)
Indian Institute of Information
Technology, Allahabad



Prof. Milli Pant

Professor
IIT Roorkee
(Saharanpur Campus)



Dr. Sudheer Khare

Scientist G, Instruments R&D
organization, DRDO
Ministry of Defense,
Govt. of India, Dehradun



Dr. Rakhi Mutha

LPU Jalandhar
Punjab

Date : 19th-20th December, 2022 Time : 10:00 am Onwards

School of Engineering and Computing organized an International Symposium on “Recent Trends on Emerging Technologies”. The event started with a lamp lighting ceremony by the dignitaries.

Day 1 started with the session done by “**Prof. O. P. Vyas**” on the topic “Prospects of Cloud Computing and Machine Learning in Networks. He emphasized on Networking researches and the importance of connectivity in today’s world.

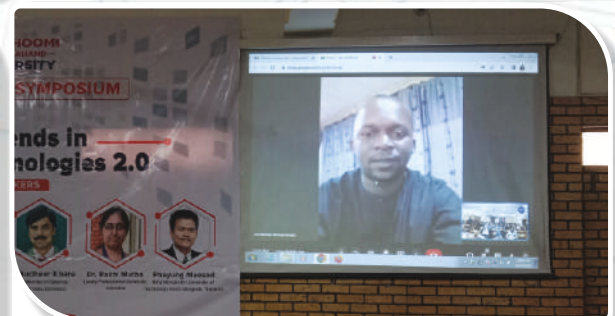
After this an International session was taken by “**Prof. Mohammed Abubakar**” on the topic “Use of Artificial Intelligence for Effective Organizational Monitoring and Evaluation.”

Next Session was taken by “**Prof. Mili Pant**, IIT Roorkee” on the topic “Trends in Health care data analysis and Big data approaches.”

Day 2 session was started by “**Dr. Sudheer Khare**, Scientist at DRDO” on the Topic “Need of technology in the current scenario.” He spotlighted technical learnings and ground practices of technology knowledge.

Lecture was followed by International speaker **Dr. Phayung Meesad**, Department of Information Technology Management, King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok, Thailand, who spoke on Topic: “Reinforcement Learning: Trends and Applications”.

Next Session was taken by **Dr. Rakhi Mutha**, ISTE Certified IOT Trainer, IBM Certified - IBM DB2 Academic Associate, Microsoft Certified - Azure Data Fundamental, LPU Jalandhar, Punjab on the topic “Block Chain, IoT and AI – A Perfect Match”.

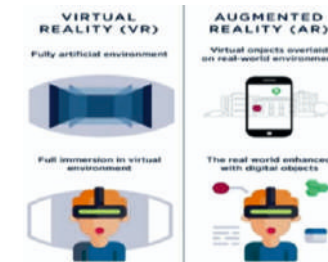


STUDENT'S CORNER



Virtual Reality and Augmented Reality- The Need of our Times

VR creates an immersive virtual environment while AR augments a real-world scene. VR is 75 percent virtual, while AR is only 25 percent virtual. VR requires a headset device, while AR does not. VR users move in a completely fictional world, while AR users are in contact with the real world. AR requires higher bandwidth than VR. AR is intended to enhance the virtual world and the real world. VR replaces the real world with a fictional reality, which is primarily intended to enhance games. Practical application of virtual reality (VR) – In the Military, this technology is used in flight simulators or battlefield simulations. In sports, digital training devices help athletes improve their own performance and analyze their techniques in medicine, VR can be used for post-traumatic stress or anxiety. At the same time, the technology allows trainee doctors to train surgical techniques.



Maneesh Singh Rawat & Ashish Singh
BCA 1st YEAR
22BCA0129, 22BCA0126

Blockchain- Digitalization of Data

A blockchain is a distributed database or ledger that is shared among the nodes of a computer network. As a database, a blockchain stores information electronically in digital format. Blockchains are best known for their crucial role in cryptocurrency systems, such as Bitcoin, for maintaining a secure and decentralized record of transactions. The innovation with a blockchain is that it guarantees the fidelity and security of a record of data and generates trust without the need for a trusted third party. One key difference between a typical database and a blockchain is how the data is structured. A blockchain collects information together in groups, known as blocks, that hold sets of information. Blocks have certain storage capacities and, when filled, are closed and linked to the previously filled block, forming a chain of data known as the blockchain. All new information that follows that freshly added block is compiled into a newly formed block that will then also be added to the chain once filled.

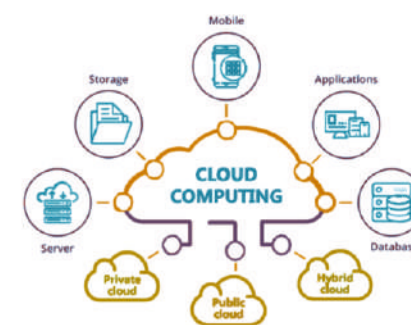
How does a Blockchain work: The goal of blockchain is to allow digital information to be recorded and distributed, but not edited. In this way, a blockchain is the foundation for immutable ledgers, or records of transactions that cannot be altered, deleted, or destroyed. This is why blockchains are also known as a distributed ledger technology (DLT). First proposed as a research project in 1991, the blockchain concept predated its first widespread application in use : Bitcoin, in 2009. In the years since, the use of blockchains has exploded via the creation of various cryptocurrencies, decentralized finance (DeFi) applications, non-fungible tokens (NFTs), and smart contracts.



Aryan Kumai & Simran Saini
BCA 1st YEAR
22BCA0091, 22BCA0017

The Growing Surge of Data and Storage - Cloud Computing

Cloud computing is the delivery of computing services including servers, storage, databases, networking, software, analytics, and intelligence over the Internet (“the cloud”) to offer faster innovation, flexible resources, and economies of scale. Any application needs a model of computation, a model of storage, and a model of communication. The statistical multiplexing necessary to achieve elasticity and the illusion of infinite capacity requires each of these resources to be virtualized to hide the implementation of they are multiplexed and shared. Amazon EC2 is at one end of the spectrum. An EC2 instance looks much like physical hardware, and users can control nearly the entire software stack, from the kernel upwards. Amazon's Scalable Storage Service (S3) charges \$0.12 to \$0.15 per giga by tenth, with additional bandwidth charges of \$0.10 to \$0.15 per gigabyte to move data in to and out of AWS over the Internet. SaaS service providers enjoy greatly simplified software installation and maintenance and centralized control over versioning Cloud Computing does not change these arguments, but it does give more application providers the choice of deploying their product as SaaS, scaling on demand, without building or provisioning a datacenter.



Harshit Tyagi & Sumit Raturi
(BCA Data Science)
22BCADATA0001, 22BCADATA0014

PLACEMENT

@ CSE



Meet Our Proud
ACHIEVER

 28 Dec 2022



S.No.	Student Name	Branch
1.	Gayatri Kumari	B.Tech CSE
2.	Shambhavi Priya	B.Tech CSE
3.	Kanchan Bhatt	B.Tech CSE
4.	Sarthak Gupta	B.Tech CSE
5.	Ravi Raj	MCA
6.	Aditi	MCA

 24 Nov 2022



S.No.	Student Name	Branch
1.	Preeti Shukla	MCA
2.	Vanshika Negi	B.Tech CSE
3.	Sakshi	B.Tech CSE
4.	Anushka Saxena	B.Tech CSE
5.	Juvaaid Ahmad	MCA
6.	Raju kumar	MCA
7.	Asthtva Kumar Verma	B.Tech CSE
8.	Bhajan Singh	B.Tech CSE
9.	Hritik Raj	B.Tech CSE
10.	Praveen Dwivedi	MCA

 26 Nov 2022



S.No.	Student Name	Branch
1.	Kajal	B.Tech CSE
2.	Mukul Shah	B.Tech CSE
3.	Sarthak Gupta	B.Tech CSE

 12 Oct 2022



BENCHMARK

S.No.	Student Name	Branch
1.	Aryan Diwakar	BCA
2.	Simarpreet Kaur	MCA
3.	Anushka Saxena	B.Tech(CSE)
4.	Himadri Diwan	B.Tech(CSE)
5.	Harshit Goyal	B.Tech(CSE)

 15 Nov 2022



S.No.	Student Name	Branch
1.	Hritik Raj	B.Tech CSE

 13 Dec 2022



S.No.	Student Name	Branch
1.	Anil Babu	B.Sc. IT
2.	Vijay Pandey	BCA
3.	Harshit Agarwal	BCA
4.	Rajan Rana	BCA

 13 Dec 2022



S.No.	Student Name	Branch
1.	Aditi	MCA
2.	Nikita Prasad	B.Sc. IT
3.	Ravi Raj	MCA
4.	Sakshi Bisht	B.Tech CSE

Successfully completed Microsoft Certified Azure Data Fundamentals on 30 Nov 2022

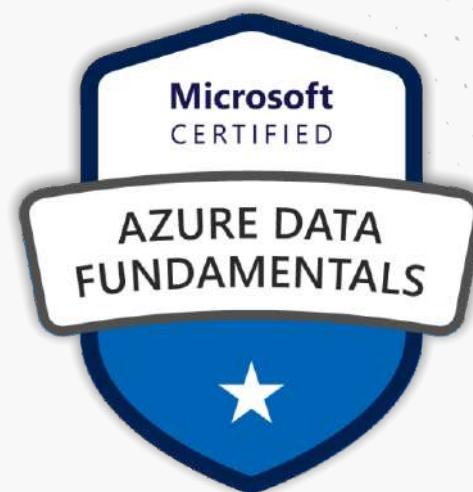
B.Tech 2nd Year-IIIrd Sem

Sr. No.	Student Name
1.	Abhinav Gupta
2.	Abhishek Kumar Singh
3.	Akash Ganera
4.	Anurag Gupta
5.	Bhanu Goel
6.	Deepak Danu
7.	Dipan Malik
8.	Disha Singh
9.	Vaibhavi Singh Saini
10.	Gaurav Lodhi
11.	Shekhawat Komal Singh
12.	Krishna Gaur

Sr. No.	Student Name
13.	Prabhanshu Singh
14.	Pratik Kumar Dev
15.	Priyanshu Bhatt
16.	Pushpesh Verma
17.	Raj Kumar Shah
18.	Rakesh Chandra Joshi
19.	Riya Yadav
20.	Sanjay Thakur
21.	Pal Satyam Pal
22.	Siddharth Bachhar
23.	Prashad Vatsalya V

BCA-2nd Year IIIrd Sem

Sr. No.	Student Name
1.	Sumit Pokhriyal
2.	Gaurav Chand



COMPUTERS FREAK !!

- 👉 Learning to code is entirely possible without any prior knowledge of Computer Science Education.
- 👉 The E-mail is older than World Wide Web.
- 👉 Nobody can create a folder named "Con" in Windows System.
- 👉 Apple Lisa Computer is the first home computer with GUI in 1983.
- 👉 The first domain name ever registered was symbolics.com



Presented by :-

**Team -
School of Engineering & Computing**



School of Engineering & Computing

Department of Computer Science & Engineering

Programmes offered

B.Tech.

- Computer Science & Engineering

B.Tech. CSE:

- Artificial Intelligence & Machine Learning
- Cyber Security & Forensics
- Data Science (Industry Integrated)
- Block Chain (Industry Integrated)
- Robotics Process Automation (Industry Integrated)

M.Tech.

- Computer Science & Engineering

B.Sc. :

- Animation & Gaming
- Information Technology

BCA

- BCA - Data Science (Industry Integrated)
- BCA - Full Stack Development (Industry Integrated)
- BCA - UX (Industry Integrated)

MCA

- MCA - Data Science (Industry Integrated)
- MCA - Full Stack Development (Industry Integrated)
- MCA - UX (Industry Integrated)
- MCA - Dev Ops (Industry Integrated)

School Highlights

5LPA

Average CTC Offered

75%

of class placed by leading companies

12LPA

Highest CTC Offered

10%

Students had multiple Job Offers & Pre Placement Offers