

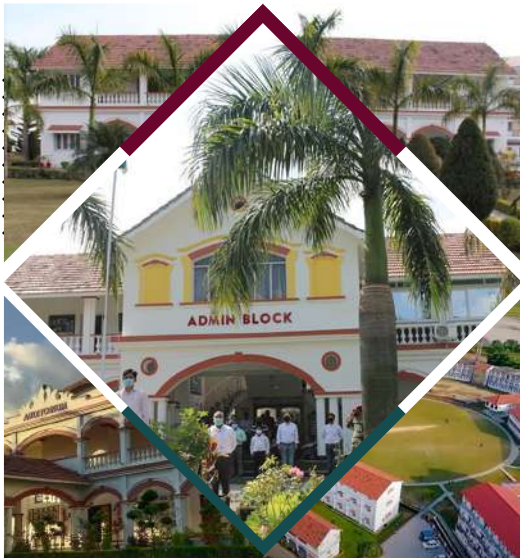


TULA'S
DEHRADUN
INSTITUTE

NAACA+

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

डिजिटल DRISHTI

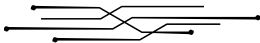


JAN-MAR(2022-2023)



OUTLINE

- 1. Achievement of the Department**
- 2. Departmental PEO & PSO**
- 3. Head of Table**
- 4. List Of Faculty Members**
- 5. Editorial Team**
- 6. Departmental Events**
- 7. Research and Innovation**
- 8. Emerging Talent**
- 9. Placement Opportunities**
- 10. Announcements**





ACHIEVEMENT OF THE DEPARTMENT

The Department of Computer Science & Engineering believes in providing the best possible facilities to its students. Our goal is to establish a friendly environment where students can flourish under the direction and support of knowledgeable staff members who have access to the latest resources. . The department is committed to offering the best possible facilities to ensure quality education for the students. Our department has timely organised different workshops, add-on certificate courses, guest lectures, etc. We are immensely elated to share that the department organised an **International Conference on Advance in Computing Communication and Materials**. The department was privileged to have **Mr. Onkar Singh, Vice Chancellor of Uttarakhand Technical University, as the event's chief guest**. The students learned different approaches to technology through certificate programmes in cybersecurity, WordPress, and Python, which proved to be hugely beneficial for them.

The department has created a perfect blend of academicians and researchers in the last three months for research papers on topics like Strategic Financial Management for Housing Finance Companies in India, Voice-Based Sign Language Detection for Dumb People Communication Using Machine Learning, and Prediction and Analysis of Supermarkets using Ridge and Polynomial Regression Techniques.

We believe in maintaining a balance between academics, extracurricular activities, and placement opportunities while maintaining a healthy teacher-student ratio and providing possibilities and scope for all.



ARTIFICIAL
COMPUTER SCIENCE AND
MACHINE
ENGINEERING



DEPARTMENTAL PEO & PSO

Department Programme Educational Objectives:

PEO1-Computer Science Professional: To equip students with theoretical and applied knowledge, enabling them to solve multidisciplinary real-life problems, becoming computer engineering professionals in programming skills for technology development, deployment, and system implementation.

PEO2-Entrepreneurship and Leadership: To cultivate engineering practitioners and leaders, solving industry's technological problems, demonstrating leadership skills, identifying research gaps and becoming successful entrepreneurs.

PEO3-Lifelong learning: To equip students with creative project management skills that help them become lifelong learners by means of continuing education.

PEO4-Social awareness and Ethics: To foster awareness and, accountability and ethics that lead towards efficient collaboration, economic growth and multidisciplinary interactions.

Department Programme Specific Outcome :

PSO1-Problem Solving Approach: Apply programming paradigms, architectural patterns, algorithmic techniques, relevant applications and augmentation to solve real-world complex problems.

PSO2-Analysis and Synthesis Techniques: Demonstrate the ability to analyse current systems to understand the solution, change or optimise the solution, and synthesise solutions based on new requirements using existing infrastructure and reusable components.

PSO3-Reusability and Adaptability Skills: Assimilate, appreciate, utilise, and promote cutting-edge technology

HEAD OF TABLE



Dr. Nishant Saxena
(Dean Academics)

I would want to thank you from the bottom of my heart for the amazing work that went into the most recent issue of "डिजिटल-Drishti." Your unshakable devotion, extraordinary effort, and limitless inventiveness are evident in every fact of this newsletter. The content, which stands as a monument to our academic achievements and research endeavours is both highly interesting and informative. Your team's commitment is further demonstrated by the beautiful design and the painstaking attention to detail. I sincerely thank the entire team for their vital contribution to maintaining the informed and connected nature of our academic community. Without a doubt, "डिजिटल-Drishti" has developed into a useful tool in which we can all take pride. Your dedication to quality is admirable, and I look forward to reading your enlightening newsletters regularly.



Dr. R.B Singh
(HOD CSE)

I congratulate and convey my best wishes to the Department of Computer Science and Engineering and the entire editorial team on the launch of the current edition of the newsletter "डिजिटल-Drishti." In the dynamic landscape of technology and academia, our CSE department has consistently strived for excellence, nurturing the brightest minds and pushing the boundaries of innovation. It has only been possible due to the sincere efforts of the energetic and hardworking team. I am confident that this edition of the newsletter also provides a great platform for the interchange and collaboration of ideas to build a digitalized India. Happy Reading!

LIST OF FACULTY MEMBERS



Dr. Sandip Vijay



Dr. Raghav Garg



Dr. Sanjeev Kumar



Dr. Anand Kumar Gupta



Dr. Sandeep Kumar



Dr. Ashish Gupta



Dr. Ahmad Jamal



Dr. Bharti Kalra



Mr. Brajendra Sharma



Dr. Nirmendra Singh



Mrs. Rashmi Mishra



Mr. Sanjay Tyagi



Mrs. Anuradha Brijwal



Mrs. Ritu Pal



Ms. Riya Kukreti



Mrs. Shivali Pundir



Mr. Arpit Goel



Mrs. Harshita Chaudhary



Ms. Manvi Bhora



Mr. Aizaz Ahmad



Ms. Aakansha Shrivastav





Mr. Sharad Pratap



Mrs. Suchi Jain



Mr. Yashpal Sinha



Mrs. Arti Goel



Mrs. Neeta Chauhan



Mrs. Jigyasha Chandok



Mrs. Pratibha Dimri



Mr. Girish Bisht



Mr. Javed



Mrs. Santwana Goel



EDITORIAL TEAM



Hafeez Pathan
(B.tech CSE 3rd Year)



Rupam Kumar
(BCA 3rd Year)



Shivali Pundir
(Faculty Coordinator)



Yamini Goyal
(Faculty Coordinator)

DEPARTMENTAL EVENTS

1. International Conference on Advance in Computing Communication and Materials

Computer Science and Engineering organized a 2-day International Conference on Advances in Computing, Communication, and Materials.

The department was privileged to have **Mr. Onkar Singh, Vice Chancellor, of Utrakhand Technical University** as the event's chief guest. The students learned many different approaches to technology and the conference proved to be hugely beneficial for them.



2. Add-on Certificate Program on Cyber Security

The Department of Computer Science & Engineering (Tula's Institute) in association with RCPL is conducting a six-day add-on certificate course January 30 to February 4, 2023) on "Cyber Security." The inaugural session started with a welcome speech from the head of the department, Prof. (Dr.) R.B. Singh, followed by a felicitation of the guests by Prof. (Dr.)Ranit Kishore (Dean of Management and Agriculture).Overall, the objective of cybersecurity is to create a secure and trustworthy computing environment, safeguarding digital assets and ensuring the privacy and safety of individuals and organizations in the digital realm.The overarching objective is to achieve a balance between key principles including confidentiality, integrity, and availability. Maintaining confidentiality ensures that sensitive information remains accessible only to authorized users, thwarting potential breaches and data leaks.Security education and awareness initiatives are paramount for cultivating a culture of cybersecurity among users and organizations. By promoting best practices and enhancing knowledge about potential threats, individuals become less susceptible to social engineering attacks and other forms of manipulation.



3. Add-on Certificate Program on WordPress

The Department of Computer Science and Engineering (Tula's Institute) in association with RCPL is offering a six-day add-on certificate course from January 30 to 4 February, 2023.

"WordPress & quote: The inaugural session started with a welcome speech from the head of the department, Prof. (Dr.) R.B. Singh, followed by a felicitation of the guests by Prof. (Dr.) Ranit Kishore (Dean of Management and Agriculture).

WordPress is a widely used open-source content management system (CMS) that enables users to create and manage websites easily. Initially launched in 2003, WordPress has evolved into a robust platform known for its flexibility, user-friendly interface, and extensive ecosystem. It is built on PHP and MySQL and is often employed for various types of websites, including blogs, business sites, portfolios, and e-commerce platforms.

ADD-ON CERTIFICATE PROGRAM ON WORDPRESS



4. Add-on Certificate Program on Python

The Department of Computer Science and Engineering associated with RCPL is conducting a six-day add-on certificate course (30th January to 4th February 2023) on "Python"e;. The inaugural session started with a welcome speech from the head of the department, Prof. (Dr.) R.B. Singh, followed by a felicitation of the guests by Prof. (Dr.) Ranit Kishore (Dean of Management and Agriculture). Python is a versatile, high-level programming language renowned for its simplicity, readability, and ease of learning. Created in the late 1980s by Guido van Rossum, Python has evolved into a powerful and widely used tool in various domains, including web development, data science, artificial intelligence, automation, and more. Its syntax emphasizes code readability, making it accessible for beginners while maintaining flexibility for experienced developers. Python's extensive standard library and a vast ecosystem of third-party packages contribute to its popularity, providing developers with a rich set of tools to tackle diverse tasks.

ADD-ON CERTIFICATE PROGRAM ON PYTHON



5. Workshop on women's Empowerment

The Department of Computer Science associated with ICT Academy conducted a 15-day workshop on Microsoft Power BI, under the aegis of the Centre for Women Empowerment.

Mr. Sarthak Pathak was the respected trainer to conducted the session and helped the students grasp the knowledge

Empowering women encompasses various aspects, including education, economic opportunities, healthcare, legal rights, and social equality. Access to quality education equips women with the knowledge and skills needed to pursue diverse career paths and make informed decisions. Economic empowerment involves ensuring that women have equal opportunities for employment, entrepreneurship, and financial independence. Healthcare empowerment focuses on addressing women's health issues and ensuring access to healthcare services.

Legal rights are crucial in protecting women from discrimination, violence, and unequal treatment. Empowering women socially involves challenging gender norms and fostering an environment that supports women's rights and contributions. Efforts to promote women empowerment often involve advocating for policies that address gender- based inequalities, supporting women-owned businesses, and encouraging representation and participation of women in leadership roles.



Research Papers

1. **Garg, R., Ahuja, M. M., Negi, M. L., Bhushan, M. B., & Gaur, M. S. (2023).** Strategic Financial Management for Housing Finance Companies in India: A Multivariate Approach. *European Economic Letters (EEL)*, 13(5), 1652-1660

Housing Finance Companies (HFCs) have traditionally played a significant role in India's formal housing finance sector. However, their prominence has waned since the fiscal year 2003 when Commercial Banks (CBs) surpassed them in market share, holding over 70 percent of the market compared to HFCs' 28 percent. Cooperative sector institutions occupy a much smaller share, approximately 0.5 percent. Despite their specialization in housing finance, HFCs face increasing challenges to their market share and profitability, particularly the smaller ones. Many smaller HFCs have already succumbed to competitive pressures. The introduction of the 'Base Rate' by the Reserve Bank of India compelled commercial banks to charge higher lending rates to HFCs, placing additional cost pressures on these institutions. Given this evolving landscape, the financial performance of HFCs has become crucial for their survival and growth. In this context, this paper aims to achieve the following objectives: (i) provide an overview of the institutional housing finance system in India, (ii) conduct a comprehensive examination of the role of HFCs in the changing housing finance market, including their principal challenges, (iii) analyze the determinants of superior financial performance in HFCs using Multivariate Discriminant Analysis (MDA) methodology, and (iv) propose effective strategies to enhance the financial performance of HFCs in the context of financial management.

2. **Pandey, A., Chauhan, A., & Gupta, A. (2023).** Voice Based Sign Language Detection For Dumb People Communication Using Machine Learning. *Journal of Pharmaceutical Negative Results*, 22-30.

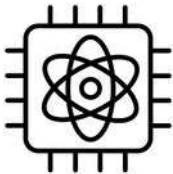
Around 2.78% of the population in our nation cannot speak (dumb). The fundamental way that two people engage is through communication. Since ancient times, people have used speech to interact with one another. Although science and technology have added comfort to human life, there are still some who are less fortunate and are battling to discover a solution that would make communication for them simpler. People who have trouble speaking utilize sign language that is based on hand movements. This program enables the blind and deaf to interact with seeing people despite their communication challenges. This study suggested a novel method of FFNN (Feed Forward Neural Network) prototype that can automatically recognize sign language to assist normal individuals in more effective communication with those who are hearing, speech, or visually challenged. This system identified the hand signal feature point extraction given with Feed Forward point extraction given with the Feed Forward neural network. Hand Gesture Recognition with a Voice Process system using HMM (Hidden Markov model) is used to provide communication between dumb people and normal people

3. Prasad, A. B., Singh, R. B., & Garg, M. Sales Prediction And Analysis Of Super Market Using Ridge And Polynomial Regression Technique

Due to the obvious rapid growth of global shops including e-shopping, daily competition amongst numerous shopping complexes as well as large super markets is growing fiercer & more aggressive. Every marketplace tries to attract the interest of consumers by providing tailored as well as restricted discounts, such that the quantity of revenues with each product can be projected for the company's managing inventory, shipping, including logistical services. Nowadays, supermarkets run own branches and franchises, known as Big Marts, keep records of every product's revenue information in order to forecast possible customers' needs & adjust inventory control. Monitoring the information warehouse's storage space is a common way to find abnormalities as well as general patterns. This generated data may be utilised by merchants like Big Mart to anticipate the future sales volume using different machine learning approaches. For estimating the sales of the company such as Sales-Mart, a predicting model is constructed utilizing XGBoost, Linear regression, Polynomial regression, as well as Ridge regression approaches, and that it reveals that the system provides the best model.

4. Tiwari, R., Gupta, A. K., Joshi, T., & Semwal, S. (2023). Performance Analysis of 16-Bit qALU using Reversible Logic Gates with QCA for Quantum Processors. Journal of Survey in Fisheries Sciences, 189-208.

Due to inadequate road maintenance, road conditions are terrible everywhere. This is particularly true for urban/rural roads. The potholes on the road grow bigger and deeper with each monsoon, increasing the number of road accidents. Over the last few years, many researchers have proposed numerous solutions to this problem. Researchers have developed systems to detect potholes in real-time. This data is recorded and passed to the road authorities by some of the researchers. The recorded data, if stored in the cloud, requires network connectivity. Also, this data is not used for reducing the number of accidents due to potholes. In this paper, we have proposed a strategy where information on the road stays on the road and will be used to notify vehicles about road conditions to avoid accidents. We are emphasizing on the importance of storing data locally rather than on remote servers. Real-time scenarios have been identified and simulated for the study. The results obtained after the simulation show that the number of road accidents caused by potholes can be successfully reduced.



quantum computing



Gaurav Shrivastva

Prioritizing Education Over Politics: A Blueprint for National Progress

In the dynamic tapestry of a nation's development, the role of education stands paramount. Education serves as the cornerstone for progress, shaping the collective intellect and providing the tools necessary for societal advancement. However, in the intricate dance between education and politics, there are times when the scales tip in favor of short-term political gains, potentially jeopardizing the long-term welfare of a nation. This article delves into the importance of prioritizing education over politics and how such a shift can become a blueprint for sustained national progress.

Education as the Engine of Progress:

Education is not merely a means to impart knowledge; it catalyzes social and economic transformation. A well-rounded education system equips individuals with critical thinking skills, creativity, and adaptability, fostering innovation and entrepreneurship. When a nation prioritizes education, it invests in a skilled and knowledgeable workforce, laying the groundwork for a competitive edge in the global arena.

The Pitfalls of Politicizing Education:

While politics plays a crucial role in governance, its interference in educational matters can lead to detrimental consequences. Short-term political agendas may influence resource allocation, curriculum development, and institutional functioning, compromising the quality and integrity of the education system. The politicization of education often results in skewed priorities, neglecting the long-term benefits that a robust educational framework can bring to society.

Building Informed Citizens:

One of the primary goals of education is to nurture informed and responsible citizens. By fostering a culture of critical thinking and intellectual curiosity, education empowers individuals to engage meaningfully in civic life. An educated populace is better equipped to make informed decisions, participate in democratic processes, and contribute positively to the nation's socio-economic fabric.

Economic Prosperity through Education:

The correlation between education and economic prosperity is undeniable. Nations prioritizing education witness higher productivity levels, technological advancements, and overall economic growth. Education opens doors to a diverse range of opportunities, reducing unemployment, and creating a workforce that can adapt to the demands of a rapidly evolving job market.

In the pursuit of a thriving and progressive nation, the emphasis must shift from immediate political gains to the enduring benefits of a well-educated populace. Education is the foundation upon which a nation's greatness is built. By prioritizing education over politics, a nation paves the way for a brighter future, where each citizen is empowered with knowledge, contributing meaningfully to the collective advancement of society.



Nitish Kumar

Discover Your Real Self

A little boy went to a telephone booth and dialed a number. The booth owner observed and listened to the conversation:

Boy: "Lady, can you give me the job of cutting your lawn?"

Women at the other end of the phone line: "I already have someone to cut my lawn." Boy: "Lady, I will cut your lawn for half the price of the person who cuts for you." Woman: "I'm very satisfied with the person who is presently cutting my lawn."

Boy : (with more perseverance) "Lady, I will even sweep the floor and the stairs of your house for free."

Women: "No, thank you

With a smile on his face, the little boy replaced the receiver. The booth owner, who was listening to all this, Said:" Son, I like your attitude. I like that positive spirit and would like to offer you a job."

Boy" No thanks.

Booth owner: "But you were pleading for one."

Boy:" No sir, I was just checking my preferred mance at the job I already have . I am the one who is working for that lady I was talking to".



Roopam Kumar

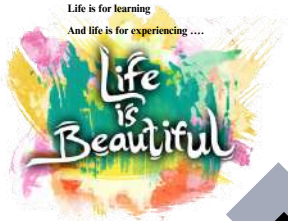
Life is Beautiful

Life is beautiful, but not always, it has lots of problems you have to face every day. Don't worry though! All these problems make it strong, they give you the courage to stand alone in the future, Life is full of moments of joy. Pleasure, success, and comfort are punctuated by misery, defeat, failures, and problems. There is no human being on earth, strong, powerful, wise, or rich, who has not experienced struggle, suffering, or failure. You have to work hard reach to the highest position. Life is full of choices, you just have to choose the right one. Life is interesting and amazing like the stars up in the skies.

Don't live the same day every day ... And call it a Life Life is for living

Life is for learning

And life is for experiencing





Adarsh Singh

सांस्कृतिक विरासत और धार्मिकता

संस्कृति, विरासत और धरोहर हमारे समाज के निर्माण में महत्वपूर्ण भूमिका निभाती है। यह तात्पर्य धरोहर और संस्कृति में एकता के महत्वपूर्ण संकेत दिखाई देती है जो हमें एक साथ रहने और समृद्ध समाज की ओर ले जाती है। हिंदी भाषा में संस्कृति और धरोहर के बारे में एक लेख दायर करने का यहाँ कार्यक्रम चल रहा है।

एक देश की पहचान उसकी संस्कृति और विरासत से होती है। हमारा देश इतना विविध और रंगीन है कि यहाँ कई धर्म और संस्कृतियाँ आपस में मिली-जुली हैं। धर्मनिरपेक्षता के माध्यम से हम इस विविधता और एकता का समर्थन करते हैं। यही कारण है कि हिंदी भाषा में संस्कृति और धरोहर अधिक महत्वपूर्ण हैं। हिंदी भाषा हमें यह समझने में सहायता करती है कि हमारी संस्कृति में क्या शामिल है। हमारी सांस्कृतिक विरासत में भाषा, कला, संगीत, नृत्य, वास्तुकला, लोकसंगीत, परंपरा, आदर्त, शौक, आदि शामिल हैं। यहाँ धार्मिक समूहों के संगठन, मंदिर, गुरुद्वारे और मस्जिदें भी हैं जो हमारी धरोहर को स्थायीता देते हैं। हमारे देश में लोग अपने धर्म से जुड़े हर त्योहार को मनाते हैं।

हिंदी भाषा में संस्कृति और विरासत के महत्व को समझना आवश्यक है क्योंकि यह हमारी पौराणिक कथाओं, इतिहास, और समाज की मान्यताओं के टीका होती है। यह भाषा हमें भारतीय सांस्कृतिक और आध्यात्मिक गहराई को समझने में मदद करती है। हमें यह सोचकर गर्व महसूस होना चाहिए कि हम एक ऐसे देश में जीते हैं जहाँ विविधता और एकता को महत्व दिया जाता है।

अतः, हमें हिंदी भाषा में संस्कृति और विरासत को बनाए रखने का प्रयास करना चाहिए और इसे अपने भविष्य के लिए देखभाल के प्रयास में लगाना चाहिए। हम अनुशासन, सेवा, धैर्य, आदेश को बनाए रखने की जरूरत है ताकि हम अपनी संस्कृतियों को अपने बच्चों के साथ आगे ले जा सकें। यह हमें एक सामूहिक समाज में आत्मनिर्भर और आत्मविश्वासी



Ms. Yamini Goyal

PUPPET SHOW

Puppets dance throughout the life
Bind with invisible string
Rolling and shaking with their goals
Ups and downs their patience and faith.

They trapped in their own net
Spectators applaud their game
Someone loses someone wins
The owner guides them to show the way
Their game is over when he wind up the game.

Puppets dance throughout the life
They bind with invisible string.



Dr. Anand Gupta

अनजान पथ अनगिनत पग
शायद कहीं तो जाना था
मंजिल तो थी शायद कहीं
और शायद कुछ तो पाना था
धुंधली सी थी एक छवि कहीं
जो मंजिल को थी दिखा रही
राहें मगर उसे पाने की
जाने क्या मतलब सीखा रही
कर लिया फासला तय अभी
कुछ हद से ज्यादा ही कहीं
मंजिल ने खुद ही बोला है
जिसकी तलाश मैं वो नहीं
कुछ पल ठिठक के ठहरा फिर
और पूछा खुद से सहम कर
है भी कोई मंजिल कहीं
या चलना है यूँ ही उमर भर
खुद ने खुद को है दिया जवाब
मंजिल को मत मंजिल बना
ये जो रास्ते हैं वही मंजिल हैं
बस चलते जा कहीं रुके बिना

©आनन्द

Student's Artwork



Mohit Pant
(B.Tech CSE 3rd Year Sec - A)



Gaurav Srivastav
(BCA 2nd yr Sec A)



Priyanka Chauhan
BCA 2nd yr Sec A



Mohit Pant
B. Tech CSE 3rd yr Sec A



Adarsh
BCA 2nd yr Sec A



Gaurav Shrivastav
BCA 2nd yr Sec A

Placement Opportunities



OUR ACHIEVERS



VAISHAY RAJ
B.TECH CSE



SWAPNIL AHLAWAT
B.TECH CSE



SAHIL JOSHI
B.TECH CSE



ROHIT KUMAR
B.TECH CSE



RAJAT HARSH
B.TECH CSE



MANISH RAJ
B.TECH CSE



LOKESH KUMAR
B.TECH CSE



ANURAG AGARWAL
B.TECH CSE



HIMANSHU KUMAR
B.TECH CSE



ATUL KUMAR
B.TECH CSE

We Congratulate them
for Being Placed at



SALARY PACKAGE:
3.5 LACS PER ANNUM

Announcements

1. **Workshop on Machine Learning from 5-10 June 2023**
2. **Workshop on Frontend Development from 5-10 June 2023**
3. **Workshop on Node.js from 22-28 June 2023**
4. **Workshop on Cloud Computing using AWS to be decided**

