Thought of the Month

Education is the movement from darkness to light.
– Allan Bloom
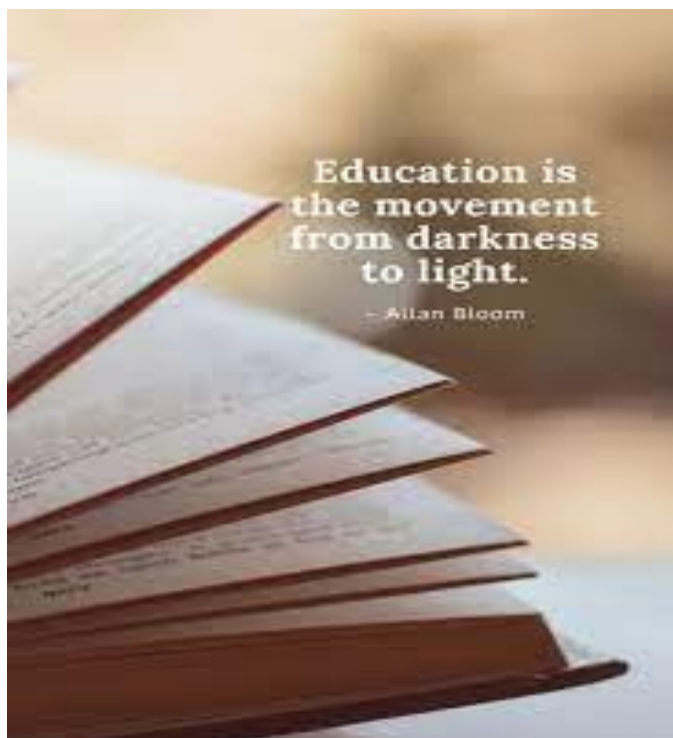
Department of Computer Science and Engineering CEC, CGC Landran

Vision of the Department

To develop proficient, research oriented and socially responsible professionals in the field of Computer Science and Engineering.

Mission of the Department

M1: To strengthen the core competence in Computer Science and Engineering through effective teaching learning methodologies.

M2: To provide research oriented environment in the area of Computer Science and Engineering addressing the need of industry and society.

M3: To promote industrial interactions and hands-on experience on latest IT tools leading to successful professional career.

M4: To facilitate the students with global exposure through international collaborations and internships.

M5: To prepare students for placements, higher studies and entrepreneurship through pre placement training programs.
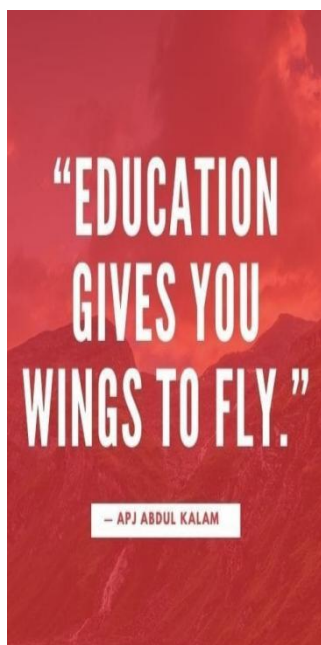
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DID YOU KNOW

"EDUCATION GIVES YOU WINGS TO FLY."
– APJ ABDUL KALAM

Message from the Head HR

Mr. Barinder S. Sawhney
Head-HR

We all know that CGC is an institution par excellence in providing academic brilliance and placement opportunities. I am elated to hear that CEC is coming up with their fourteenth edition of the newsletter, since it acts as a platform to motivate the students and faculty to learn and showcase their talent and also helps them to indulge in academic activities.

I pass on my good wishes to the entire team associated with the newsletter and wish them success for the future.

CSE Department organized Expert talk on cyber security and ethical hacking

The primary objective of this event focused on making students aware of career opportunities in cyber security and guiding them on how to step in the field of ethical hacking. The session was organised by the Department of CSE with the help of departmental coordinator Ms. Geetanjali Babbar. Her support and motivation led to the event being a complete success. It was a 2-hour expert talk by Ms. Karanpreet Kaur, Senior information Security Analyst, CDAC, Mohali. A very insightful and interactive event for students in which our expert for the session briefed all the students about various aspects and safety measures regarding cyber security.

A student of 6th semester of CSE Department began a startup with Company.

Manmohan, student of 6th semester CSE Department began a startup on Digital Marketing. Digital marketing refers to the use of online platforms and technologies to promote products, services, or brands. It encompasses various channels, including websites, social media, email marketing, search engine optimization (SEO), content marketing, and online advertising.

By targeting specific audiences and analysing data-driven insights, digital marketing enables businesses to enhance their online presence, engage customers, and drive conversions.

As consumer behaviour increasingly shifts online, mastering digital marketing techniques has become vital for companies to remain competitive and thrive in the digital era.

Department of CSE organizes an Expert talk on ReactJs

The event aimed to deepen participants' understanding of ReactJS, covering fundamental and advanced concepts. Through interactive discussions and a Q&A session, attendees gained practical insights and solutions. The objective was to foster ongoing community engagement and knowledge-sharing within the ReactJS development community.

The session was organised by the Department of CSE with the help of Departmental coordinator CEC with the coordinator **Ms. Geetanjali Babbar.** Her support and motivation led to the event being a complete success. The event focused on elevating participants' technical proficiency in ReactJS, elucidating core concepts and delving into advanced topics like React Hooks and state management best practices. The overarching technical objective was to enhance the expertise of the ReactJS development community through targeted knowledge-

Pre-Parivartan activity "Project Expo: Where Ideas Become Reality "organised by CSE Dept. at Government Middle School, Bharatpur, Kharar , Mohali, Near Landran

On 26th October 2023 CSE department of Chandigarh Engineering College-CGC Landran organized a pre-Parivartan activity "Project Expo: Where Ideas Become Reality". A team of two faculty members and fifteen students visited Govt. Middle School, Bharatpur, Landran for spreading awareness among the students about new emerging technologies in the field of computer science such as Deep Learning, Computer Vision, Artificial Intelligence, Robotics etc.

During the interaction with students, team showcased their projects and related technologies. The team discussed about the latest findings in the field of computer science. The whole session was very interactive. A short quiz was conducted at the end of session and winners were awarded with prizes.

A New Paradigm for User Interface and Experience Design: The Integrated Approach

Article submitted by: Ms. Geetanjali Babbar(Assistant Professor) & Amisha Rani

User Interface (UI) and User Experience (UX) design have been the focus of intense research and development efforts in recent years. The current approach to UI and UX design is often fragmented, with separate teams working on each aspect of the design. This approach can lead to inconsistencies and disconnects in the final product. This Article proposes a new integrated approach to UI and UX design that merges the two disciplines into a cohesive whole. We argue that this approach has the potential to significantly improve user satisfaction, engagement, and retention.

UI and UX design are crucial components of modern software and application development. UI design focuses on the visual and functional aspects of the user interface, while UX design focuses on the user's overall experience with the product. Traditionally, these two disciplines have been treated as separate entities, with different teams working on each aspect of the design.

In conclusion, our proposed integrated approach to UI and UX design has the potential to significantly improve user satisfaction, engagement, and retention. This approach requires collaboration between UI and UX designers throughout the design process and a focus on merging the visual and functional aspects of the product. By adopting this approach, software and application developers can create products that are more engaging and satisfying for users.

Article by Faculty Members of CSE in RISE Newsletter-INNOVARE

Data-Centric Computer Vision:

Article Submitted By -
Dr. Sukhpreet Kaur & Ms. Parneet Kaur
CSE department, CEC-CGC

Data-centric computer vision is a method for improving the precision and effectiveness of computer vision algorithms by placing a high priority on the gathering, organizing, and analysing of vast amounts of data.

The fundamental tenet of data-centric computer vision is that algorithms for computer vision may learn from massive amounts of data and improve over time. Computer vision systems can be trained to recognize patterns and characteristics in images more correctly by gathering and curating high-quality data, which can improve performance in a variety of applications. Machine learning methods, like deep learning, which are particularly well-suited to managing vast volumes of data, are frequently used in data-centric computer vision. With the help of these methods, computer vision systems can learn from big datasets and generate predictions based on patterns they spot in the data

The Importance of Data-Centric AI

The deployment of AI and deep learning-based solutions in computer vision situations has improved for businesses from a variety of sectors, such as automotive, electronics, and medical device manufacture, when compared to conventional, rules-based implementations. The adoption of a data-centric strategy has resulted in some advancements that potentially make AI benefits available to most businesses.

- 10x faster development of computer vision apps
- Application deployment time is shorter, and accuracy and yield are improved.

Computer vision task (steel sheet inspection)	Accuracy
	76.2%
	+0%
	+16.9% (93.1%)

Article by Faculty Members of CSE in RISE Newsletter- INNOVARE
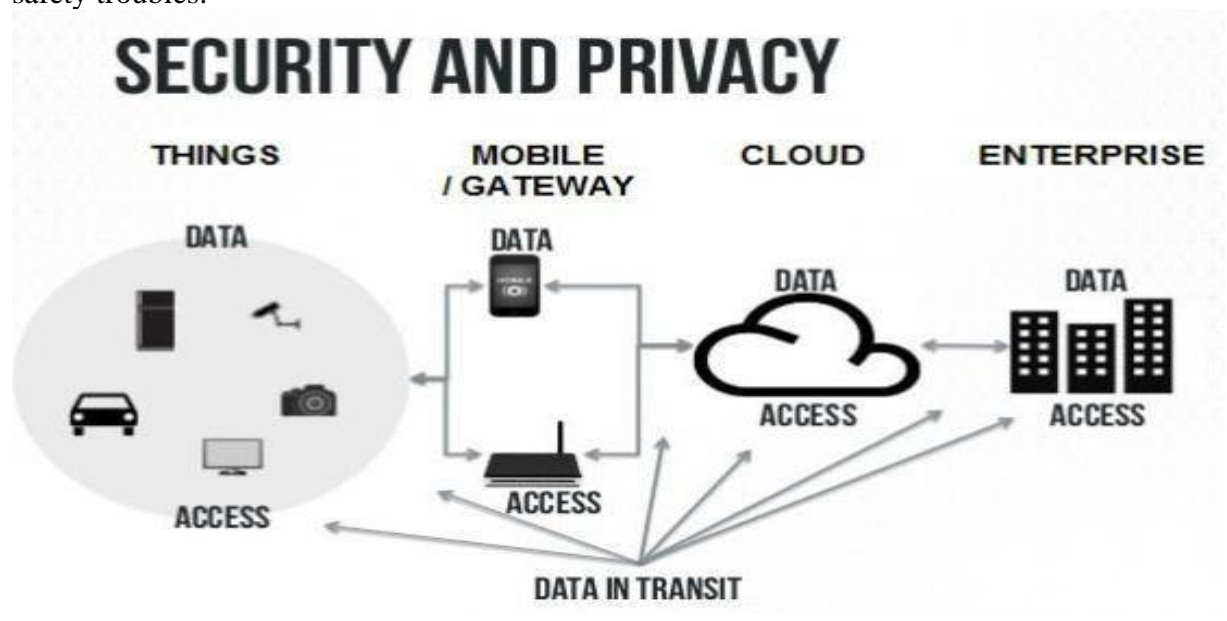
IOT SECURITY – RECENT TRENDS

Article Submitted By -
Dr. Sukhpreet Kaur & Ms. Parneet Kaur
CSE department, CEC-CGC

Modern-day trends of a generation "connect the unconnected," which means that every object that may be related in the approaching years. The IoT is the community of physical items containing sensors and processing powers embedded in devices to attach the end-users to extensive-vicinity networks for transmission. It may be seen anywhere around us, including cars, public lighting fixtures, domestic home equipment, health-care structures, and personal virtual assistants like Google domestic. As an example, IoT gateways permit rapid and smooth get entry to the IoT world, and they are well matched with IoT servers (Microsoft Azure, Amazon AWS, IBM Cloud, Google Cloud, and many others.) and customized servers that support MQTT. Globally, IoT devices are attached to the internet and communicate information via embedded sensors and software programs. These gadgets reduce the human effort to create easiness in life and maximize aid utilization. The concept of connecting unconnected devices is nearly 188 years antique. It became introduced in 1832 when the primary electromagnetic telegraph became invented. At that point, the idea became translated into the terms "Embedded net" or "Pervasive Computing," and the primary ever linked tool changed into the Coca-Colamerchandising system.

Future Research Directions

▪ There may be a need to develop a preferred platform to proportion IoT-based total research datasets.

▪ Keeping in thoughts the confined sources of IoT devices is the price-green way to remedy IoT structures' protection issues.

▪ There may be a need to increase a cost-green block chain-based strategy to resolve IoT systems' safety troubles.

Cultural events (Technical/Non-Technical events)

Aaradhya Sharma got 1st position in IKGPTU YOUTH FEST (SOUTH ZONE) - INDIAN CLASSICAL VOCAL SOLO at Swami Vivekananda Institute of Engineering and technology held on 17.09.2023-19.09.2023.

Nishant Dhiman got 1st position in Parivartan Cultural fest held on 30-10-2023 and 31-10-2023.

Vineet Soni (2237078) student of 3rd sem got 2nd position in Quizathan in Parivartan held on 30-10-2023 and 31-10-2023.

Mansi (2236875) student of 3rd sem stood 2nd in Indian weightlifting federation and Chandigarh Olympic Association held at Sports complex sector 42 Chandigarh on 18 & 19 Nov 2023.