



**Computer Society of India**

Institute Membership No:100859

**Dr. SIVANTHI ADITANAR COLLEGE OF ENGINEERING**

**TIRUCHENDUR**

**DEPARTMENT OF COMPUTER SCIENCE & *ENGINEERING***

*UG & PG*

**DEAR READER,**

IT'S A GREAT PLEASURE TO PRESENT BEFORE YOU THE NEWSLETTER OF COMPUTER SOCIETY OF INDIA STUDENTS' CHAPTER WHICH HELPS THE ENTIRE CSI FRATERNITY TO KNOW THE CSETIVITIES OF THE STUDENTS' CHAPTER FROM TIME TO TIME.

**Volume 1 No.3-2021**

## *Computer Society of India Students' Chapter*

**PATRON & SBC :** Dr.G.Wiselin Jiji, Principal  
**CSI Coordinators:** Dr.R.Jensi, ASP/CSE  
Mrs.P.Chanthiya , ASP/CSE  
**Secretary :** Mr.R.Kaninsan Joshua,IV CSE  
**Joint Secretary :** Mr.Abishiek Nimalan,III CSE  
**Treasurer :** Mr.M.Petchi Muthu, IV CSE

<b>S.NO</b>	<b>DATE</b>	<b>EVENT</b>	<b>CHIEF GUEST</b>
1.	06.07.2021	CSI Pencil art contest(online)	Dr.R.Jensi,AP/CSE
2.	15.07.2021	Pencil art contest	Dr.D.Jemi Florinabel , Professor /CSE
3.	02.09.2021	Coding Contest	Dr.R.Jensi, ASP/CSE
4.	27.09.2021	Debugging Contest	Dr.R.Jensi,AP/CSE
5.	18.10.2021	Web Designing Contest	Dr.R.Jensi,AP/CSE
6.	20.10.2021	Banner Design contest	Dr.R.Jensi,AP/CSE
7.	26.11.2021	Mini project presentation	Dr.R.Jensi,AP/CSE
8.	21.12.2021	Online Aptitude test	Dr.R.Jensi, ASP/CSE
9.	30.12.2021	Logo design contest	Dr.R.Jensi, ASP/CSE

## Events

1. **CSI Pencil art contest** was conducted for UG Students of CSE on 06.07.2021. The session was judged by Dr.R.Jensi, AP/CSE.
2. **Pencil art contest** was conducted for UG Students of CSE on 15.07.2021. The session was judged by Dr.R.Jensi, AP/CSE.
3. **Coding Contest** was conducted for UG Students of CSE on 02.09.2021. The session was judged by Dr.R.Jensi, AP/CSE.
4. **Debugging Contest** was conducted for UG Students of CSE on 27.09.2021. The session was judged by Dr.R.Jensi, AP/CSE.
5. **Web Designing Contest** was conducted for UG Students of CSE on 27.09.2021. The session was judged by Dr.R.Jensi, AP/CSE.
6. **Banner Design contest** was conducted for UG Students of CSE on 20.10.2021. The session was judged by Dr.R.Jensi, AP/CSE.
7. **Mini project presentation** was conducted for UG Students of CSE on 26.11.2021. The session was judged by Dr.R.Jensi, AP/CSE.
8. **Online Aptitude test** was conducted for UG Students of CSE on 21.12.2021. The session was judged by Dr.R.Jensi, AP/CSE.
9. **Logo design contest** was conducted for UG Students of CSE on 30.12.2021. The session was judged by Dr.R.Jensi, AP/CSE.

## **Innovation at the edge**

*Submitted By Ajitha, IV CSE*

### **Edge Computing**

Otherwise known as cloud computing provides software with scalability. Cloud space removes the limits of physical space that can be expanded exponentially with the help of virtual computers. The latter makes up the resources utilized within this technology, and there have been more and more inventions for increasing cloud computing power. The technology is relatively easy to use, as discussed by Create & Learn Team in their blog (2022). They say that 94% of data centre traffic comes from cloud computing technology. Also, the technology allows processing of time-sensitive data in remote locations with challenged connectivity from a centralized location (Duggal, 2022). This useability continues to contribute to the IoT trend overall.

**Edge.** Edge computing is the deployment of computing and storage resources at the location where data is produced. This ideally puts compute and storage at the same point as the data source at the network edge. For example, a small enclosure with several servers and some storage might be installed atop a wind turbine to collect and process data produced by sensors within the turbine itself. As another example, a railway station might place a modest amount of compute and storage within the station to collect and process myriad track and rail traffic sensor data. The results of any such processing can then be sent back to another data center for human review, archiving and to be merged with other data results for broader analytics.

**Cloud.** Cloud computing is a huge, highly scalable deployment of compute and storage resources at one of several distributed global locations (regions). Cloud providers also incorporate an assortment of pre-packaged services for IoT operations, making the cloud a preferred centralized platform for IoT deployments. But even though cloud computing offers far more than enough resources and services to tackle complex analytics, the closest regional cloud facility can still be hundreds of miles from the point where data is collected, and connections rely on the same temperamental internet connectivity that supports traditional data centers.

In practice, cloud computing is an alternative -- or sometimes a complement -- to traditional data centers. The cloud can get centralized computing much closer to a data source, but not at the network edge.

**Fog.** But the choice of compute and storage deployment isn't limited to the cloud or the edge. A cloud data center might be too far away, but the edge deployment might simply be too resource-limited, or physically scattered or distributed, to make strict edge computing practical. In this case, the notion of fog computing can help. Fog computing typically takes a step back and puts compute and storage resources "within" the data, but not necessarily "at" the data.

Fog computing environments can produce bewildering amounts of sensor or IoT data generated across expansive physical areas that are just too large to define an *edge*. Examples include smart buildings, smart cities or even smart utility grids. Consider a smart city where data can be used to track, analyze and optimize the public transit system, municipal utilities, city services and guide long-term urban planning. A single edge deployment simply isn't enough to handle such a load, so fog computing can operate a series of fog node deployments within the scope of the environment to collect, process and analyze data.

Note: It's important to repeat that fog computing and edge computing share an almost identical definition and architecture, and the terms are sometimes used interchangeably even among technology experts.

# Virtual Reality and Augmented Reality

*Submitted By Christy.G, III CSE*

Virtual reality has been around for a while now yet appears to still be a trend. Similar to IoT, new innovations and applications within the same make it worth the time. Firstly, VR allows users to immerse themselves into an environment, whereas AR enhances the user's environment. These technologies have primarily been used in gaming and military training. Specifically, naval training through the Virtualship simulation software. In 2020, 20% of the adults in the United States used a VR headset at least once during the year. The technology has potential for educational and socializing use soon. Currently, it is dominantly used in the gaming field by the general public.

How does Augmented Reality (AR) work?

One difference between VR and AR is that AR displays different content in the real world. Computer vision, depth tracking and mapping play a key role within this process. All data can be collected in real time via cameras, for example, and processed directly. This makes it possible to display digital content whenever the user needs it.

Special devices are required to fully use the functionality of AR. Smart Glasses, for example, are often used, which provide the data via Smart Glasses software.

Augmented Reality (AR): Advantages and disadvantages of the technology

If AR or VR is better is a question that cannot be answered in general terms. Both technologies have their advantages and disadvantages. These are some of the pros and cons of Augmented Reality:

## **Advantages:**

- Enables individualized learning and enhances the learning process.
- AR offers a wide range of applications that are continuously being improved.
- The technology makes it possible to increase accuracy and efficiency.
- Experience or knowledge can be shared over long distances.

## **Disadvantages:**

- The costs of implementing AR are comparatively high.

- Many devices have only a low level of performance.
- A key disadvantage is the lack of user privacy.
- If the focus on security is neglected, the introduction of augmented reality can lead to a security breach.

Application: Augmented Reality (AR) in practice

In practice, augmented reality offers a wide range of possibilities. This makes it interesting for both private and business users. Special apps can embed images, text or videos.

- Fading in digital content over real magazines already works well in the **printing and advertising industry**.
- Users who want to **translate texts into other languages** can use modern translation apps thanks to AR technology.
- Augmented reality in construction and **logistics** is an attractive way to increase the efficiency of employees and the business processes.
- Augmented reality is an easy way to **get in touch with customers, colleagues or technicians**.



THANK YOU