DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TechTransmit

**A DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING's MAGAZINE**

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Vision of the Department

To produce technically competent professionals with quality education in cutting edge technologies with professional ethics.

Mission of the Department

M1: To impart quality technical education in design and implementation of IT applications through innovative teaching - learning practices

M2: To inculcate Professional behavior, with strong ethical values, and research capabilities.

M3: To educate students to be an effective problem solver with social sensitivity for the betterment of the society and humanity as a whole.

Programme Educational Objectives(PEOs)

1. **PEO-I:** Demonstrate proficiency in fundamental concepts and advanced technologies of computer science to succeed in their careers and/or obtain a higher degree.

2. **PEO-II:** Analyze complex computing problems in multidisciplinary area and creatively solve them.

3. **PEO-III:** Recognize ethical dilemmas in work environment and apply professional code of ethics.

NARSIMHA REDDY ENGINEERING COLLEGE MAISAMAGUDA KOMPALLY SECUNDERABAD

ARTICLES

HAPTIC TECHNOLOGY

Haptic technology is also known as kin aesthetic communication or 3D touch. It refers to any technology that can create an experience of touch by applying forces, vibrations, or motions to the user. These technologies can be used to create virtual objects in a computer simulation, to control virtual objects, and to enhance remote control of machines and devices. Haptic devices may incorporate tactile sensors that measure forces exerted by the user on the interface. The word "haptic" from the Greek, means "tactile, pertaining to the sense of touch". Simple haptic devices are common in the form of game controllers, joysticks and steering wheels.

Haptic technology progressed relatively slowly for decades. In the 1990s, companies were already trying to create consumer products that allow users to receive tactile feedback from devices and "feel" virtual objects. But the technologies being developed were largely confined to company research labs, and consumers didn't have much exposure to practical products ready for the marketplace

One of the main fields where haptic technology is used is gaming. Video gaming seems to be the industry that currently has the most to gain from haptic technology.

C. RAMYA

18X01A0510

5G TECHNOLOGY

Fifth-generation wireless – better known as 5G – promises anytime, anywhere connectivity that works 20 times faster than the previous generation, opening the door to a wide variety of new services and potential solutions, and ushering in the Fourth Industrial Revolution. Could it even help fight climate change? Contrary to concerns about the carbon footprint of the ICT industry, some argue that 5G could help the sector reduce CO_2 emissions by 1.5 gig a tones by 2030. What does 5G mean for a sustainable future? There may be potential for 5G to drive the development of a lower carbon and more sustainable economy. This new form of wireless access previously inaccessible high-frequency millimeter radio waves, between 30 and 300 Gigahertz – and that is the real game changer. Once developed, all devices that run on the 5G NR (new radio) standard will no longer need to be connected to Wi-Fi hot spot, introducing an era of constant connectivity, as well as tremendous speed increases,

What will this look like in practice?` One Webs introduction of a satellite enabled global internet could include the entire population in this hyper connected future. The positives of this are vast: the areas that currently have patchy or no internet accesses at all are commonly areas in poverty. Internet access provides a resource that will allow these areas to improve connectivity with emergency services, gender equality, telemedicine, and education. The democratization of access to information that the internet has provided has spread knowledge equality.

J.PAVAN KUMAR
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INTERNET OF THINGS

Internet of Things is the concept of connecting any device (so long as it has an on/off switch) to the Internet and other connected devices. The IoT is a giant network of connected things and people–all of which collect and share data about the way they are used and about the environment around them.

That includes an extraordinary number of objects of all shapes and sizes–from smart microwaves, which automatically cook your food for the right length of time, to self-driving cars, whose complex sensors detect objects in their path, to wearable fitness devices that measure your heart rate and the number of steps you've taken that day, then use that information to suggest exercise plans tailored to you

Devices and objects with built-in sensors are connected to an Internet of Things platform, which integrates data from the different devices and applies analytics to share the most valuable information with applications built to address specific needs. These powerful IoT platforms can pinpoint exactly what information is useful and what can safely be ignored. This information detects patterns, make recommendations, and detect possible problems before they occur.

M.SUPRIYA

18X01A0587

BIGDATA ANALYTICS

Big data analytics is the often complex process of examining big data to uncover information such as hidden patterns, correlations, market trends and customer preferences that can help organizations make informed business decisions.

IMPORTANCE OF BIG DATA ANALYTICS:

Organizations can use big data analytics systems and software to make data driven decisions that can improve business-related outcomes. The benefits may include more effective marketing, new revenue opportunities, customer personalization and improved operational efficiency. With an effective strategy, these benefits can provide competitive advantages over rivals.

WORKING OF BIG DATA ANALYTICS:

Data analysts, data scientists, predictive modelers, statisticians and other analytics professionals collect, process, clean and analyze growing volumes of structured transaction data as well as other forms of data not used by conventional BI and analytics programs.

Here is an overview of the four steps of the big data analytics process:

Data professionals collect data from a variety of different sources. Often, it is a mix of semi structured and unstructured data. While each organization will use different data streams, some common sources include:

Internet click stream data
Web server logs

Cloud applications; Data is prepared and processed. After data is collected and stored in a data warehouse or Data Lake, data professionals must organize, configure and partition the data properly for analytical queries.

R.YASHWANTH

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