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Contents:

* CARBON NANOTUBE TRANSISTOR
* DIGITAL TWIN TECHNOLOGY
* INTELLIGENT PROCESS AUTOMATION

Byte Quest is the article published by the CSE dept of Vasavi College of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

 Good, bad or indifferent if you are not investing in new technology, you are going to be left behind.

-Philip Green

 Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

-Stewart Brand

FACULTY CO-ORDINATORS

T.NISHITA(ASST. PROFESSOR)

M.SUNDARI(ASST. PROFESSOR)

STUDENT COORDINATORS

AMREEN KOUSAR (4/4 CSE-A)

D.SWAPNA (3/4 CSE-A)

NIKHITHA (2/4 CES-A)

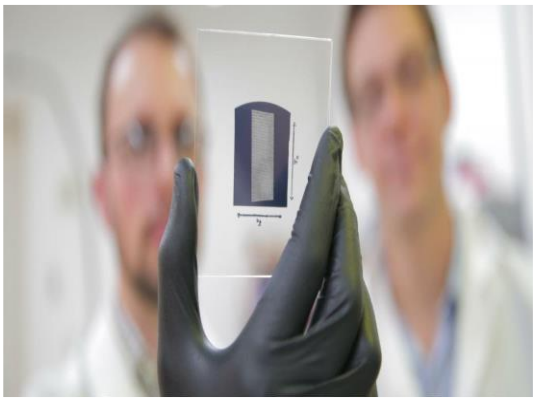
KRISHNA CHAITANYA (4/4 CSE-B)

RAHUL (3/4 CSE-B)

ABHINAV(2/4 CSE-B)

CARBON NANOTUBE TRANSISTOR

For the first time, scientists have built a transistor out of carbon nanotubes that can run almost twice as fast as its silicon counterparts. This is big, because for decades, scientists have been trying to figure out how to build the next generation of computers using carbon nanotube components, because their unique properties could form the basis of faster devices that consume way less power. "Making carbon nanotube transistors that are better than silicon transistors is a big milestone," First developed back in 1991, carbon nanotubes are basically minuscule carbon straws that measure just 1 atom thick.
Imagine a tiny, cylindrical tube that's approximately 50,000 times smaller than the width of a human hair, and made from carbon atoms arranged in hexagonal arrays.



That's what a carbon nanotube wire would look like if you could see it at an atomic level.

K. VAMSHI KUMAR (CSE B 2/4)

DIGITAL TWIN TECHNOLOGY

IoT is an area where the so-called Digital Twins concept evolves at the fastest pace. Modern household appliances use a lot of smart components equipped with sensors to gather data about real-time status, working conditions, problems and so on. They're integrated to cloud-based systems to gather data, then process and analyze it.

And here's how a digital twin is created. It's a kind of pairing appliance which reflects its real-life counterpart in the digital environment. This virtual model of a product or service allows for analysis of huge amount of various data.

In effect, we can deal with problems before they even occur, prevent downtime, develop new functionalities and much more.

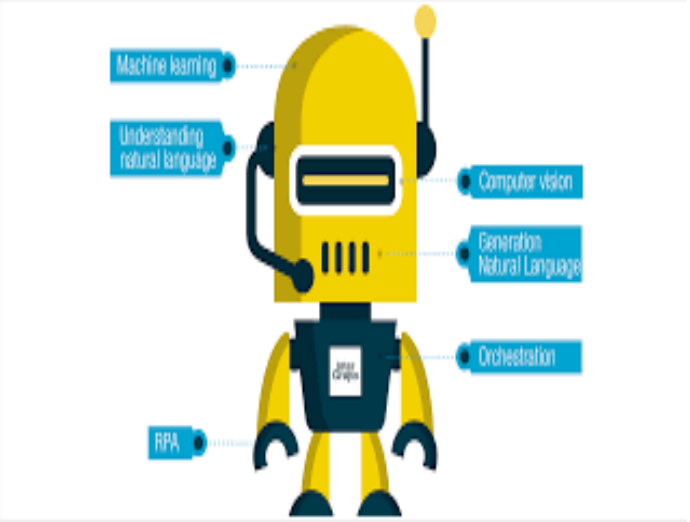
The digital twin concept has the widest coverage in such projects as smart cities, real time navigable models, or health care – with virtualization of a hospital systems for work safety and continuity.

BHARATH (CSE-B 2/4)

INTELLIGENT PROCESS AUTOMATION

We have evolved from room-sized mainframes to laptops, from using stick shifts to autonomous vehicles, from personal assistants to virtual assistants, and to so much more in just the blink of an eye. The fast-paced technology-driven world has made our lives extremely convenient now. We see breakthroughs happening in our lives with technological applications doing the heavy lifting most of the time. This level of sophistication and ease is only possible because of industries becoming digitized. The ultimate aim - to have increased efficiency, enhanced accuracy, improved customer satisfaction and optimized workflows - has engaged organizations to invest in automation and operating tools. One such automation tool that is widely used today is robotic process automation. Designed to take up low-quality jobs, robotic process automation has helped organizations reduce human errors significantly. Low to no manual errors have led to increased productivity, ultimately profiting the industries in business and revenue growth. Hence, organizations across the world are largely deploying robotic process automation, which is why its market size is expected to hit 3.11 billion dollars by 2025.

Robotic process automation tools are applications that run predetermined codes to carry out a specific set of tasks. For the tool to provide accurate results, it should be fed with the right inputs. Inputs should be in an understandable manner, which means the data should be in a structured format. If the tool is fed with unstructured data, the tool will not understand how to analyze the data in the first place. To add to the complexity, most of the data that organizations collect is in an unstructured format. Hence, to make the most out of all the data gathered, organizations are opting to make automation tools capable of not only handling workflows smartly but also making decisions.



ARSHIYA (CSE-B 2/4)