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COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY DEPARTMENT

Presents

TECHNICAL MAGAZINE

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INSTITUTE VISION MISSION



Vision

To provide quality technical education in rural area



Mission

1. To impart eco-friendly, advanced engineering knowledge.
2. To inculcate ethical and moral values among budding engineers.
3. Establishment of mentoring system for all-round personal and professional enhancement.
4. To make students aware social and national responsibilities.
5. To encourage students to pursue higher education and take competitive and career enhancement courses.
6. To create technology based society which is the need of modern era.

INFORMATION TECHNOLOGY DEPARTMENT

Vision

To inspire rural students of the region through quality education in Information Technology.



Mission

M1: To maintain state-of-the-art facilities and resources where students can enhance their understanding of technology.

M2: To provide students with a computational environment for continuous learning in which they can explore, apply, and transfer knowledge.

M3: To provide continuing education programmes in Information Technology field for the benefit of stakeholders.

COMPUTER ENGINEERING DEPARTMENT

Vision

To provide competent knowledge in the field
of computer technology.



Mission

M1: To provide conceptual as well as practical knowledge
to adapt changing technology in computer field.

M2: To provide the quality education to meet needs of
profession & society by arranging seminars, workshops and
interactive sessions.

M3: To prepare for interpersonal skills, leadership qualities,
ethical values, lifelong learning skills, and higher education of
budding engineers.



New Technology Trends in 2023

1. Artificial Intelligence



The hype for Artificial Intelligence has been around us for a while. If you are someone who works with technology, you may not relish how ubiquitous Artificial Intelligence has become. AI has already shown its superiority in navigation apps, smartphones, and more to carry out creative and mundane tasks.

This AI hype isn't going to end any time soon. The growing ecosystem of low-code or no-code AI systems and as-a-service platforms will make it more accessible.

Another exciting field to watch out for in AI is synthetic content. It includes harnessing the AI's creative power to

generate new images, sounds, or data that never existed

before. In 2023, we can expect to witness the growth of the productive form of AI across business and entertainment.



According to Precedence Research, the global AI market is expected to hit US\$ 1,597.1 billion by 2030. With AI spreading its usage in various fields, we can expect new jobs in programming, development, testing, and many more.

On the other hand, AI also offers handsome salaries ranging from \$115,000 for entry-level positions to \$205,000 for

experienced professionals - making it the top technology trend you must check out for in 2023!

Top tech giants like Facebook, Google, etc., are putting AI in front of everything. This indicates the future belongs to this technology, and there will be a dire need for talented professionals in this field.

There are many different types of positions within artificial intelligence. Some of the top job titles include:

- AI Engineer
- AI Research scientist
- Machine Learning Engineer
- AI Architect.
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2. Metaverse



At this stage, Metaverse can be described as “a more digital world.” The experience of immersive online environments and next-level user experiences are expected to witness a massive growth in the next five years.

In simple terms, the word "metaverse" can be described as a profoundly immersive 3D virtual world experience obtained using a combination of AR, VR, and MR technologies. By creating a virtual world where users may play games, interact socially, conduct business, and more. The metaverse platform enhances the experience of the internet.

Mark Zuckerberg believes the growth of this trend might be due to virtual and augmented reality (VR/AR). All sizes of organizations in industries, from banking to fashion, have jumped on board to build metaverse-like experiences.

In 2023, The metaverse has the potential to help unlock access to new creative, social, and economic opportunities. Tech giant Facebook announced the creation of 10,000 new highly skilled positions for the metaverse in the next five years. This means better opportunities for talented metaverse engineers, marketers, architects, and visionaries.

Learning the skills needed for the metaverse is more effortless.

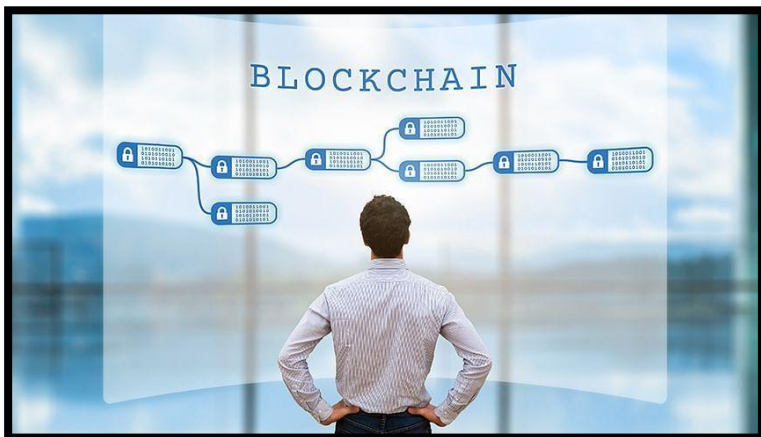


3. Blockchain



In the present times, blockchain technology is in demand. The popularity of this technology has grown, and many large organizations are moving in that direction. As a result, the field of blockchain technology requires a large number of developers.

The benefits of blockchain include the network's decentralization, security, and privacy of data. Blockchain applications go well beyond cryptocurrencies like bitcoin. According to Gartner, blockchain's value will increase quickly, hitting \$176 billion by 2025 and \$3.1 trillion by 2030.



Whether startups or large organizations, everyone is looking to tap into the blockchain market. Companies like Infosys, Capgemini, TCS, Accenture, and others are among the leading recruiters of blockchain developers.

4. Quantum Computing



Quantum Computing There is currently a global race to create quantum computing at scale.

Quantum computing, which uses subatomic particles to develop new ways to process and store data, is expected to make it possible for computers to be a trillion times faster than the fastest regular processors currently available.



The risk of quantum computing is that it could render our present encryption techniques ineffective. As a result, any nation that invests heavily in the development of quantum computing will be able to break the encryption employed by other nations, businesses, security systems, and other organizations. Watch this trend closely in 2023 as countries including the US, UK, China, and Russia make significant investments in the development of quantum computer technology.

Today's quantum computers are many times faster than conventional computers, and major companies are investing in the innovations of this technology. By 2026, it is expected that the global market for quantum computing will generate more than \$1,765 billion in revenue, as per Markets And Markets.

5. Digital Immune System



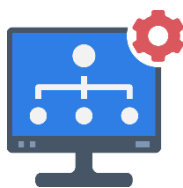
The past several years have witnessed an unparalleled focus on risk in both the physical and digital worlds. Cybersecurity concerns are getting more severe

as data breaches and other problems get more sophisticated.

It's good that methods for avoiding internet scams, spam, and other annoyances are getting increasingly complex. An efficient digital immune system may significantly reduce operational and security concerns through monitoring, automation, and the most recent design innovations.

As the value of these tools becomes more widely recognized in the coming year, anticipate receiving a lot more inquiries regarding the condition of your organization's digital immune system and your efforts to fortify and safeguard it.

6. Hyperautomation



Hyperautomation is one of the trending technologies today.

Hyperautomation enables the automatic completion of repetitive activities without manual or human input. It uses Robotic Process Automation (RPA), machine learning, and artificial intelligence (AI) to alter old and new machinery and processes. An organization can thrive in a more competitive environment by utilizing digital transformation to achieve cost and resource efficiency.

Organizations must boost production, reduce expenses, and operate more efficiently to succeed in the current market. You can advance with the help of hyperautomation services. To learn more about hyperautomation, see the blog that follows this one.

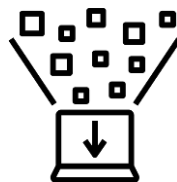
Businesses of all sizes, small, medium-sized, and large, can gain a lot from hyperautomation. It is unquestionably true that many businesses have started deploying hyperautomation technology and enjoying its advantages. According to a Salesforce poll, organizations anticipate having hyperautomation on their technological roadmaps by 2024.

By 2025, it is predicted that global spending on AI will reach \$15 trillion, according to McKinsey. TCS, UiPath, Wipro, Infosys, and Appian, to name a few, are some of the

world's most renowned companies operating in the hyperautomation market.

It's time for you to begin your journey because the practice of hyperautomation is rapidly gaining popularity and relevance.

7. Datafication



Today's organizations rely heavily on data, transforming industries like accounting and human resources. Datafication is the process of turning all of the objects in our life into digital devices that are powered by

data. To summarize, datafication transforms manual, labor-intensive procedures into data-driven technologies.

Longer than we can recall, data will be a part of everything from our cell phones to our industrial equipment, office software, and AI-powered devices. As a result, managing our data securely and safely has turned into a sought-after competence in our industry.



If done right, datafication can transform raw data into knowledge. Numerous firms have already benefited from this.

As a result, companies now more than ever need to rely on data-driven initiatives to build a qualified staff and a solid corporate culture. The greatest choice is typically to delegate this plan to a partner who is an authority in the area.

8. Industry Cloud Platforms



By utilizing industrial cloud platforms, businesses can improve the agility of their workload management. They can speed up changes to compliance processes, data analysis, and business operations. They mix platforms, software, and infrastructure as a service to maximize adaptability, accelerate time to value, and suit the needs of vertical industrial sectors.

According to Gartner, 40% of respondents have already started using industrial cloud platforms. By 2027, this will have sped up over 50% of organizations' key business initiatives. Industry cloud platforms use integrated data fabrics and business-specific capabilities to adapt applications to market disruptions quickly.



9. Wireless-value Realization

The Future Of Wireless



Next-generation wireless will improve connectivity while also assisting in process optimization for increased reliability, cheaper costs, lower risks, and more productivity. The shift to digital transformation will be more seamless if several wireless technologies are combined onto a single infrastructure and utilized.

If the technical foundation for future wireless is more accessible, unified, secure, dependable, and scalable, it will require less funding. The new wireless technology will make it easier for the Internet of Things (IoT) trend to collect environmental data. Applications in satellite technology, radar sensing, energy harvesting, location tracking, and other areas are likely.

10. A Digitally Editable World



Since we can now change things in the digital world in a way that impacts the physical world, this idea goes beyond merely creating immersive online experiences. As an illustration, think about the employment of digital twins.

The Formula 1 racing teams build digital twins of the race cars and test them in computer simulations and virtual wind tunnels. They can then 3D print the parts for the actual car after digitally modifying them till they are optimized.

We see a comparable ability to change or program materials from the actual world in nanotechnology. By altering their characteristics and compositions at the nanoscale, we may give materials new capabilities, such as water-repellent clothing and self-healing paints, or we can develop whole new material like graphene, the world's thinnest and strongest substance.

The best example of the editable world is the genetic manipulation of living organisms like plants, animals, or people to change the genetic information necessary for their growth and survival. With the aid of cutting-edge methods like the CRISPR Cas9 gene editing method and projects like the Human Genome Project, we can now

successfully generate digital representations of complete DNA strands.

With this technology in 2023, it is possible to create endless possibilities, as any characteristic of an inherited living organism can theoretically be changed. It is feasible to create pest- and disease-resistant crops, immunize kids against illnesses their parents are predisposed to, and create treatments specifically suited to each patient's genetic profile.

11. The Hyper-Connected, Intelligent World



This trend is the one that actually connects all of the others. The data required to build the metaverse, create digital twins, train intelligent machines, and develop new strategies for enabling digital trust is gathered by the interconnected sensors, devices, and infrastructure network. This is referred to as the Internet of Things (IoT), and in 2023, its influence on our lives will remain significant.

More focus will be paid to enabling advanced and more advantageous machine-to-machine interactions. These days, we are used to furnishing both our homes and offices with smart technology. But we commonly encounter problems when gadgets can't interact because of diverse platforms and operating systems. In 2023, research on developing global standards and communication protocols that gadgets can use to connect with one another will continue. As a result, they will operate more effectively and be able to assist us with a larger range of duties.

Another focus will be on IoT security, which will incorporate tools with AI-assisted prediction skills, and companies investing in IoT will prioritize improvements.

12. Sustainable Tech



Finally, a push toward sustainable Tech will be seen in 2023. We are all dependent on technology,



such as smartphones, tablets, and computers, but where do the components required to create these gadgets come from? Where rare earth resources originate and how we use them will be of greater relevance to the general public.

Furthermore, we utilize cloud services like Netflix and Spotify, which are still running in big data centers that consume a lot of electricity.

In 2023, attempts to increase supply chain transparency will likely continue as consumers want energy-efficient products and services backed by more sustainable technologies.

Conclusion

Technology will unavoidably keep advancing at a faster rate. If you want to succeed in your tech career, you need to master new technologies, learn how to deal with constant change, and use it as a competitive advantage.



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