TECH OZRIC

MAGAZINE

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ADVANCING KNOWLEDGE THROUGH TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

KGISL INSTITUTE OF TECHNOLOGY, COIMBATORE – 641035

TECH OZRIC MAGAZINE

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DEPARTMENT OF INFORMATION TECHNOLOGY

VISION

To produce Competent Graduates suitable for Industry and Organization in the field of Information Technology by providing industry embedded learning with social responsibility.

MISSION

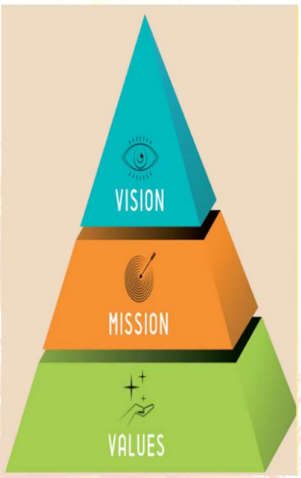
MD-1: To accomplish an effective teaching learning process through innovative practices for empowering the graduates to face societal challenges.

MD-2: To enhance the proficiency of faculty members across various domains of information technology through skill development programs.

MD-3: To nurture IT professionals through the provision of essential infrastructure and facilities for effective learning.

MD-4: To attain research excellence in the field of information technology by instilling the values of self-directed learning and fostering creative thinking through collaborative partnerships with institutes and industries.

MD-5: To foster holistic student growth by engaging them in cocurricular and extracurricular activities.



PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

PEO1: Demonstrate technical competence with analytical and critical thinking to understand and meet the diversified requirements of industry, academia and research.

PEO2: Exhibit technical leadership, team skills and entrepreneurship skills to provide business solutions to real world problems.

PEO3: Work in multidisciplinary industries with social and environmental responsibility, work ethics and adaptability to address complex engineering and social problems.

PEO4: Pursue lifelong learning, use cutting edge technologies and involve in applied research to design optimal solutions.: Exhibit technical leadership, team skills and entrepreneurship skills to provide business solutions to real world problems.

PROGRAM SPECIFIC OUTCOMES (PSO'S)

PSO1: Develop and deploy software applications using advanced programming languages, data structures, and algorithms to address real-world IT challenges in areas such as system design, web development, and mobile computing.

PSO2: Design and manage IT-based business solutions by leveraging cloud computing, data analytics, and automation tools, demonstrating entrepreneurial capabilities in the IT services and product development sectors.

PSO3: Adapt to the dynamic IT industry by ethically embracing advancements such as artificial intelligence, cybersecurity, and blockchain, while contributing responsibly to societal, environmental, and organizational IT needs.

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TECHNICAL ARTICLE: SCOPE OF DIGITAL MARKETING IN 2022

By Nandhini S

Scope of Digital Marketing in India is huge – it's a great way to get your business seen by people online. As internet connectivity and mobile phone usage are increasing at an exponential rate, it has become a necessity for companies to use digital marketing tools to reach out to their customers. It is estimated that close to 67% of the Indian population will be on social media by 2025. Companies are also leveraging mobile apps for marketing due to its widespread usage among Indians – with nearly 760 million smartphone users in India, smartphones have become a great way for marketers to interact with their customers.

Digital marketing has been pivotal in building an online presence for many companies, especially startups or SMEs who do not have enough budget or manpower to engage offline audience. Digital marketing is a constantly changing industry that is quickly becoming the most popular form of marketing.

Digital Marketing is the process of promoting your business or product on the internet through various channels and platforms. It includes both online and offline activities such as social media advertising, search engine optimization, email marketing, display advertising etc.

The key to successful digital marketing is to create a strategy that best suits you and your business needs. You should know what type of content will work for you (video, blog post or social media) and where to put it for maximum exposure.

Digital Marketing in India has been growing by leaps and bounds in the past few years. With the rise in smartphones, internet penetration, and social media platforms, it has become easier for companies to reach out to wider audiences. Digital marketing is a type of marketing that takes advantage of digital technologies like social media, e-commerce websites and search engines to reach potential customers. Digital marketing also includes mobile advertising.

How is Digital Marketing Evolving in India?

With emerging technologies such as AI, chatbots and virtual reality, digital marketing is evolving to fit the needs of the current generation. It is important for marketers to understand these changes in order to stay up-to-date and be able to be successful.

Digital Marketing has evolved over time to suit the needs of today's technology savvy consumers. As a result, we are seeing new emerging technologies like chatbots and virtual reality being integrated into marketing campaigns. In order for marketers to stay successful, they need to keep up with these changes in order not fall behind as the future of Marketing evolves.

VIRTUALIZATION OF IT SYSTEMS

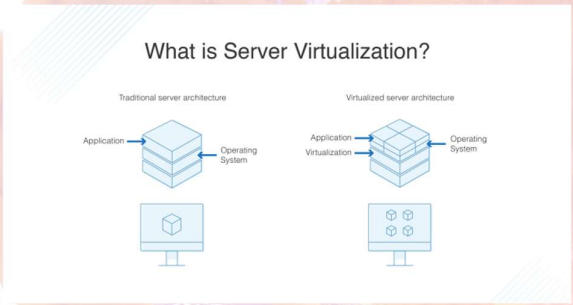
By Puviyarasu P

The term Virtualization is described as the decoupling of a service request or system resource from the underlying physical infrastructure that powers the service. It is the science of emulating a hardware

functionality within a software system – creating a virtual version of a physical systems such as hardware platforms, storage and network resources. The hardware resources are logically distributed between software applications that can consume the computing power in virtual infrastructure environments without having to depend on the physical hardware components. As a result, virtualization lets organizations operate hundreds of servers in the same way they operate a few server machines.

Virtualization architecture:

A virtualization architecture is a conceptual model specifying the arrangement and interrelationships of the particular components involved in delivering a virtual -- rather than physical -- version of something, such as an operating system (OS), a server, a storage device or network resources.



Virtualization is commonly hypervisor-based. The hypervisor isolates operating systems and applications from the underlying computer hardware so the host machine can run multiple virtual machines (VM) as guests that share the system's physical compute resources, such as processor cycles, memory space, network bandwidth and so on. A type 2 hypervisor, also known as a hosted hypervisor, is installed on top of the host operating system, rather than sitting directly on top of the hardware as the type 1 hypervisor does. Each guest OS or VM runs above the hypervisor. The convenience of a known host OS can ease system configuration and management tasks.

Benefits of Virtualization:

- Server Consolidation
- Energy consumption
- Better availability
- Disaster recovery

Important Goals to Follow:

·Optimize the power consumption of physical servers, while maintaining the Qos. · To treat power as a constraint via server power budgets. The concepts of Consolidation and **Virtualization:**

Leveraging existing IT Assets like Servers, Storage and Network resources. · Increasing the efficiency of IT Professionals through centralized simplified management. Improving Availability and Ensuring Business Continuity. Defeat Data Center sprawl and Infrastructure underutilization.

Server Consolidation:

Server Consolidation is an approach to the efficient usage of computer server resources in order to reduce the total number of servers or server locations that an organization requires. Server consolidation is exactly what it sounds like; it's essentially consolidating hardware for more effective usage.

Consolidating resources offers several benefits, such as:

- Decrease in cooling and electrical costs
- Reduction in server load growth and data center expansion
- Reduction in warranty and licensing costs
- Purchasing power of commodity hardware as opposed to specialized hardware · Business agility with the ability to leverage cloud and shared infrastructure

Storage Consolidation:

Storage Consolidation, also called storage convergence is a method of centralizing data storage among multiple servers. The objective is to facilitate data backup and archiving for all subscribers in an enterprise, while minimizing the time required to access and store data. Other desirable features include simplification of the storage infrastructure, centralized and efficient management, optimized resource utilization, and low operating cost.

Server Virtualization:

Server Virtualization is the portioning of a physical server into smaller virtual servers. In server virtualization the resources of the server itself are hidden, or masked, from users, and software is used to divide the physical server into multiple virtual environments, called virtual or private servers. One common usage of this technology is in webservers. Virtual Web Servers are a popular way of providing low-cost web hosting services. Instead of requiring a separate computer for each server, dozens of virtual servers can co-reside on the same computer.

Storage Virtualization:

Storage Virtualization is the amalgamation of multiple network storage devices into what appears to be a single storage unit. Storage virtualization is often used in Storage Area Network (SAN), a high speed sub network of shared storage devices. The management of storage devices can be tedious and time-consuming. Storage Virtualization helps the storage administrator perform the tasks of backup, archiving, and recovery more easily, and in less time, by disguising the actual complexity of the SAN. Users can implement virtualization with software applications or by using hardware and software hybrid appliances. The technology can be placed on different levels of a storage area network.

BLUE EYES TECHNOLOGY

By Balasurya S

The blue eyes technology works on Artificial Intelligence. It aims to give human abilities to a computer. A research team of IBM has come up with this technology to make a computer understand and sense human feelings and behavior. The aim of the blue eyes technology is to give human power or abilities to a computer so that the machine can naturally interact with human beings as humans interact with each other, through speech, facial expressions and touch. All human beings have some perceptual capabilities, the ability to understand each other's emotional level or feelings from their facial expressions. Blue eyes technology aims at creating a computer that has the abilities to understand the perceptual powers of the human being by recognizing their facial expressions and react accordingly to them. All these perceptual capabilities are embedded in the gadgets using the Blue Eyes Technology. This shows how far science and technology can progress and develop. The Blue eyes technology identifies human emotions using image processing techniques by extracting eye portion from the captured image and compares it with the stored images in the database. This high-end technology facilitates the computers to talk, listen and feel our presence with various tools of artificial intelligence like face recognition, fingerprint, and video calls etc., This technology is used to simplify life by providing user-friendly facilities. It also helps in reducing the gap between the computer and human.

It is an aim at creating computational machines that have sensory abilities like those

of human beings. It creates a computational machine that also feels like a human which uses camera and microphone to identify the actions and the emotions of a user by identifying the actions and emotions of the user. It also repeats like a human being.

The word blue in the blue eye technology stands for Bluetooth which facilitates wireless communication and eye stands for the eye movement which allows us to obtain a lot of interesting and necessary information. The basic thought behind this technology is to give the computer the human potential. We all have some perspective skills that as we can understand each other's feelings for example we can understand one's emotional state by analyzing his facial expression basically computer gains human power and intelligence. The blue eye technology aims at designing computational machine that have per spectral and sensory abilities similar to that of human beings. It uses our non-obtrusive sensing method using most modern video cameras and microphones to identify the user's action through the use of imported sensory abilities. The machine can understand what a user wants where he is looking at and even realize his physical or emotional state. The blue eyes are used to avoid and reduce the human limitations like tiredness oversight mental illness. So we human sit in front of the computer for long time; it results in tiredness or oversight mental illness.

So to reduce these limitations we can use a computer installed with the blue eyes technology.The blue eyes technology can be used to less mental illness of the human beings to build a machine that can understand your emotions verifying identity fields are a presence and interact with us. So for these limitations, to overcome these limitations a blue eyes technology can be used.

BITCOIN

By KANISHKA P

Bitcoin (₿) is a decentralized digital currency that operates on a peer-to-peer network. Transactions are verified by network nodes using cryptography and recorded on a public distributed ledger known as the blockchain. The cryptocurrency was introduced in 2008 by an unknown individual or group under the pseudonym Satoshi Nakamoto. It came into use in 2009 when its implementation was released as open-source software.

New bitcoins are generated as rewards through a process called mining. They can be exchanged for traditional currencies, products, and services. Bitcoin has faced criticism for issues such as its association with illegal activities, the significant electricity consumption of mining operations and their environmental impact, price volatility, and security breaches involving cryptocurrency exchanges. At various times, some investors and economists have described bitcoin as a speculative bubble.

Multiple economists, including several Nobel laureates, have referred to bitcoin as an economic bubble. Various journalists, financial experts, and institutions, such as the central bank of Estonia, have raised concerns that bitcoin exhibits characteristics similar to a Ponzi scheme.

The term *bitcoin* was first defined in a white paper published in 2008. It is derived from combining the words "bit" and "coin." There is no universal agreement on capitalization; some sources differentiate by using "Bitcoin" for the system and network, and

"bitcoin" for the currency itself. However, several major publications and dictionaries recommend using the lowercase form in all contexts.

Some governments have officially incorporated bitcoin in certain capacities. Notably, El Salvador and the Central African Republic have adopted it as legal tender. Additionally, Ukraine has used bitcoin to receive donations supporting its resistance efforts during the conflict with Russia.

RUN BEFORE YOU CRAWL

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