THE MET LEAGUE OF COLLEGES
MET
AS SHARP AS YOU CAN GET
Bhujbal Knowledge City
Institute of Technology, Polytechnic, Nashik
Approved by AICTE, DTE Mumbai & Affiliated to MSBTE
https://metbhujbalknowledgecity.ac.in

COMP अतुल्य

E-News Letter – Department of Computer Engineering
Term 2021-22 VOL-2 Issue-1

Department of Computer Engineering

Vision

To develop competent computer engineers to accept challenges based on technical skills, professional ethics and social responsibility.

Mission

M1. To provide learning environment from fundamental to emerging trends in computer engineering.

M2. To impart technical education to meet the requirements of the IT industry and society.

M3. To develop in students a sense of professional ethics and social responsibility.

"Focus on education is a big strength. I want to see young people focus on creativity and take more risks."
Sundar Pichai

Programme Educational Outcomes (PEOs) given by MSBTE:

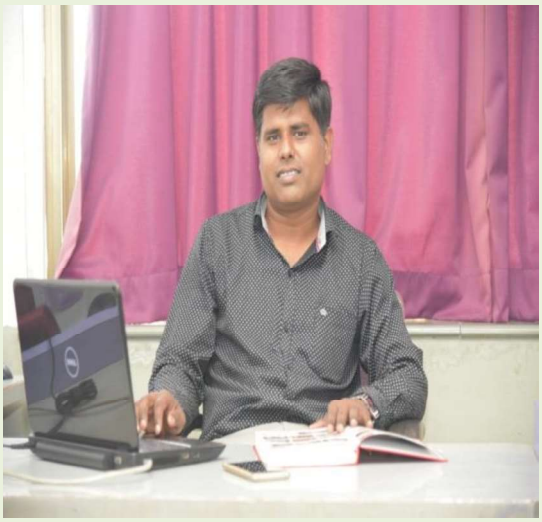
1. Provide socially responsible, environment friendly solutions to Computer engineering related broad-based problems adapting professional ethics.
2. Adapt state-of-the-art Computer engineering broad-based technologies to work in multi-disciplinary work environments.
3. Solve broad-based problems individually and as a team member communicating effectively in the world of work.

Programme Specific Outcomes (PSOs) given by MSBTE:

PSO1. Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO2. Computer Engineering Maintenance: Maintain computer engineering related software and hardware systems.

Message from HOD



Welcome to Department of COMPUTER Engineering, Department of Engineering was established in 2006. The Department seeks to combine excellence in education with service to the industry. Our vision is to develop competent computer engineers to accept challenges based on technical skills, professional ethics and social responsibility. Our goal is to provide students with a balance of intellectual and practical experiences that enable them to serve a variety of societal needs. The department has a team of well qualified, experienced and motivated faculty members to prepare the young minds of our students for global competition.

The department regularly organizes various professional development activities and grooms its students with the communication classes and personality development program. Sports, co-curricular and extra-curricular activities takes place at institute level and students participate in various intra-colleges, inter-college, inter-university fests/competitions. Department constantly works for overall growth of students and inculcate the qualities/features that are required and acceptable by Society.

Through innovative teaching-learning process and leadership building experience at the Department, students gain vital communication and critical-thinking skills. The Department has always been providing a platform for the students to enhance their employability skills through Industry-Department Collaboration with MoUs. Turning a student in to a good and proficient citizen is the prime aim of the department.

We are confident that our students will emerge as assets not only to this institution but also to the entire society at large. All the Best.

Prof. S.P. Kholambe.

HOD-Computer

INNOVATIONS AND TRENDS IN COMPUTER ENGINEERING

Computing Power - Computing power will continue to explode in 2022. We now have considerably better cloud infrastructure, and many businesses are re-plat forming to the cloud.

We are also seeing a push towards better networks – 5G is being rolled out, and 6G is on the horizon. That means even more power in our phones, in our cars, and in our wearable devices.

Smarter Devices - Growing computer power is enabling us to create smarter devices. We now have intelligent televisions, autonomous cars, and more intelligent robots that can work alongside humans to complete more tasks. In 2022, we'll see continued momentum for this smart device explosion, including the introduction of intelligent home robots.

Extended Reality - We now have more augmented reality (AR) capabilities on our devices (particularly our phones and tablets), and we're seeing an even bigger push toward virtual reality (VR). In 2022, we'll see new, lighter, more portable VR devices, so instead of having clunky headsets that require WiFi connections, we will have devices that are more like glasses that connect to our phones and give us superior VR experiences on the go. These extended reality advances pave the way for incredible experiences in the metaverse, a persistent, shared virtual world that users can access through different devices and platforms.

Datafication - Data is a key enabler for all of these trends. All of the digitization in our world today means we have enormous amounts of data available, and data has now become the number one business asset for every organization. We can use data to better understand our customers, research key trends, and get insight into what's working inside our organizations.

Seminars / Industrial Visits/Guest Lectures

Department of Computer Engineering organized a Guest Lecture on "Web Development"
This was addressed by Mr. Krish Advani, Co-founder & VP-Engineering, Quick work Asia & Europe.

Department of Computer Engineering organized Industrial Visit at Sahyadri Farms Nashik

MET'S Institute of Technology – Polytechnic, Nashik organised Seminar on
"Basics of innovative Thinking"

Objectives of Seminar:

[1] SCAMPER methodology for idea generation.
[2] Lean Techniques for resource utilization.
[3] I3G and 3A formula for innovation.
[4] Basic Principle for innovation.

Department of Computer Engineering organised Guest lecture on

"Advance Python, What after Python?, Python Career Road Map"

Resource Person- Mr. Swapnil B. Pagare (Alumini)

ARTICLES/POEMS

What is Cloud Computing?

Cloud Computing is defined as storing and accessing of data and computing services over the internet. It doesn't store any data on your personal computer. It is the on-demand availability of computer services like servers, data storage, networking, databases, etc. The main purpose of cloud computing is to give access to data centers to many users. Users can also access data from a remote server. Examples of Cloud Computing Services: AWS, Azure, Google Why the Name Cloud? The term "Cloud" came from a network design that was used by network engineers to represent the location of various network devices and there inter-connection. The shape of this network design was like a cloud.

Why Cloud Computing?

With increase in computer and Mobile user's, data storage has become a priority in all fields. Large-scale and small-scale businesses today thrive on their data & they spent a huge amount of money to maintain this data. It requires a strong IT support and a storage hub. Not all businesses can afford high cost of in-house IT infrastructure and back up support services. For them Cloud Computing is a cheaper solution. Perhaps its efficiency in storing data, computation and less maintenance cost has succeeded to attract even bigger businesses as well.

Cloud computing decreases the hardware and software demand from the user's side. The only thing that user must be able to run is the cloud computing systems interface software, which can be as simple as Web browser, and the Cloud network takes care of the rest. We all have experienced cloud computing at some instant of time, some of the popular cloud services we have used or we are still using are mail services like Gmail, Hotmail or yahoo etc. While accessing e-mail service our data is stored on cloud server and not on our computer. The technology and infrastructure behind the cloud is invisible. It is less important whether cloud services are based on HTTP, XML, Ruby, PHP or other specific technologies as far as it is user friendly and functional. An individual user can connect to cloud system from his/her own devices like desktop,

laptop or mobile. Cloud computing harnesses small business effectively having limited resources, it gives small businesses access to the technologies that previously were out of their reach. Cloud computing helps small businesses to convert their maintenance cost into profit. Let's see how? In an in-house IT server, you have to pay a lot of attention and ensure that there are no flaws into the system so that it runs smoothly. And in case of any technical glitch you are completely responsible; it will seek a lot of attention, time and money for repair. Whereas, in cloud computing, the service provider takes the complete responsibility of the complication and the technical faults.

Types of Clouds

Following are the different Types of Clouds:

1. Private Cloud: Here, computing resources are deployed for one particular organization. This method is more used for intra-business interactions. Where the computing resources can be governed, owned and operated by the same organization.
2. Community Cloud: Here, computing resources are provided for a community and organizations.
3. Public Cloud: This type of cloud is used usually for B2C (Business to Consumer) type interactions. Here the computing resource is owned, governed and operated by government, an academic or business organization.
4. Hybrid Cloud: This type of cloud can be used for both type of interactions – B2B (Business to Business) or B2C (Business to Consumer). This deployment method is called hybrid cloud as the computing resources are bound together by different clouds. Benefits of Cloud Computing The potential for cost saving is the major reason of cloud services adoption by many organizations. Cloud computing gives the freedom to use services as per the requirement and pay only for what you use. Due to cloud computing it has become possible to run IT operations as an outsourced unit without much in-house resources. Now in this Cloud Computing paper, we shall see the

Benefits of Cloud Computing.

1. Lower IT infrastructure and computer costs for users
2. Improved performance
3. Fewer Maintenance issues
4. Instant software updates
5. Improved compatibility between Operating systems
6. Backup and recovery
7. Performance and Scalability
8. Increased storage capacity
9. Increase data safety
10. Examples of Cloud Computing

Cloud computing applications: **Health Care**: Medical professionals can do diagnostics, host information, and analyse patients remotely with the help of cloud computing. Cloud computing allows doctors to share information quickly from anywhere. It also saves costs by allowing large data file transfers instantly. This certainly increases efficiency. Ultimately, cloud technology helps the medical team ensure patients receive the best possible care without unnecessary delay. The condition of patients can also be updated in seconds with the help of remote conferencing.

Education: Cloud computing is also useful in educational institutions for distance learning. It offers various services for universities, colleges, professors, and teachers to reach thousands of students all around the world. Companies like Google and Microsoft offer various services free of charge to faculties, teachers, professors, and students from various learning institutions. Various educational institutions across the world use these services to improve their efficiency and productivity.

Government: The U.S. military and government were early adopters of cloud computing. Their Cloud incorporates social, mobile, and analytics technologies. Although, they must adhere to strict compliance and security measures (FIPS, FISMA, and FedRAMP). This protects against cyber threats both domestically and abroad.

Big data Analytics: Cloud computing helps data scientists analyze various data patterns, insights for better predictions and decision making. There are many open-source big data development and analytics tools available like Cassandra, Hadoop, etc., for this purpose.

Communication: Cloud computing provides network-based access to communication tools like emails and social media. WhatsApp also uses a cloud-based infrastructure to facilitate user communications. All the information is stored in the service provider's hardware.

Business Process: Nowadays, many business processes like emails, ERP, CRM, and document management have become cloud-based services. SaaS has become the most vital method for enterprises. Some examples of SaaS include Salesforce, HubSpot.

Facebook, Dropbox, and Gmail: Cloud computing can be used for the storage of files. It helps you automatically synchronize the files from different devices like desktop, tablet, mobile, etc. Dropbox allows users to store and access files up to 2 GB for free. It also provides an easy backup feature. Social Networking platforms like Facebook demand powerful hosting to manage and store data in real-time. Cloud-based communication provides click-to-call facilities from social networking sites and access to the instant messaging system.

Citizen Services: The cloud technology can be used for handling citizen services too. It is widely used for storing, managing, updating citizen details, acknowledging forms, and even verifying the current status of applications can be performed with the help of cloud computing.

Cloud Computing Services The three major Cloud Computing Offerings are

1. Software as a Service (SaaS),
2. Platform as a Service (PaaS) and
3. Infrastructure as a Service (IaaS)

Different business use some or all of these components according to their requirement.

SaaS (Software as a Service) SaaS or software as a service is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network (internet). SaaS is becoming an increasingly prevalent delivery model as underlying technologies that supports Service Oriented Architecture (SOA) or Web Services. Through internet this service is available to users anywhere in the world. Traditionally, software application needed to be purchased upfront &then installed it onto your computer. SaaS users on the other hand, instead of purchasing the software subscribes to it, usually on monthly basis via internet. Anyone who needs an access to a particular piece of software can be subscribe as a user, whether it is one or two people or every thousands of employees in a corporation. SaaS is compatible with all internet enabled devices. Many important tasks like accounting, sales, invoicing and planning all can be performed using SaaS.

PaaS (Platform as a Service) Platform as a service, is referred as PaaS, it provides a platform and environment to allow developers to build applications and services. This service is hosted in the cloud and accessed by the users via internet. To understand in asimple terms, let compare this with painting a picture, where you are provided with paint colours, different paint brushes and paper by your school teacher and you just have to draw a beautiful picture using those tools. PaaS services are constantly updated & new features added. Software developers, web developers and business can benefit from PaaS. It provides platform to support application development. It includes software support and management services, storage, networking, deploying, testing, collaborating, hosting and maintaining applications.

IaaS (Infrastructure as a Service) IaaS (Infrastructure As A Service) is one of the fundamental service model of cloud computing alongside PaaS(Platform as a Service). It provides access to computing resources in a virtualized environment "the cloud" on internet. It provides computing infrastructure like virtual server space, network connections, bandwidth, load balancers and IP addresses. The pool of hardware resource is extracted from multiple servers and networks usually distributed across numerous data centers. This provides redundancy and reliability to IaaS. IaaS(Infrastructure as a service) is a complete package for computing. For small scale businesses who are looking for cutting cost on IT infrastructure, IaaS is one of the solutions. Annually a lot of money is spent in maintenance and buying new components like hard-drives, network connections, external storage device etc. which a business owner could have saved for other expenses by using IaaS.

1. Cloud Computing is defined as storing and accessing data and computing services over the Internet.
2. The term "Cloud" came from a network design used by network engineers to represent the location of various network devices and their interconnection.
3. Today many large and small-scale businesses thrive on their data & they spend a huge amount of money to maintain this data.
4. Cloud computing architecture helps organizations to lower their IT infrastructure and computer costs per user.
5. Four Types of Cloud are 1) Private, 2) Community, 3) Public, and 4) Hybrid.
6. Important Cloud Computing Services are 1) Software as a Service (SaaS), 2) Platform as a Service (PaaS), and 3) Infrastructure as a Service (IaaS).
7. Grid Computing is a middleware to coordinate disparate IT resources across a network, allowing them to function as a whole.
8. Utility computing is the process of providing service through an on-demand, pay-per-use billing method. 9. Privacy is a strong barrier for users to adapt Cloud Computing systems.

Yash Patil
Second Year Student-Computer Engg

कोण कुठला आला हा विषाणू,
जणू स्फोट व्हावा परमाणु,
गरगर फिरला जीवनाचा सुकाणू,
सांगा तरी काय करायचं

बाहेर आहे लॉकडाऊन,
आणि घरी अस्तित्व गौण,
त्यामुळे घडे सक्तीचे मौन,
सांगा तरी काय करायचं

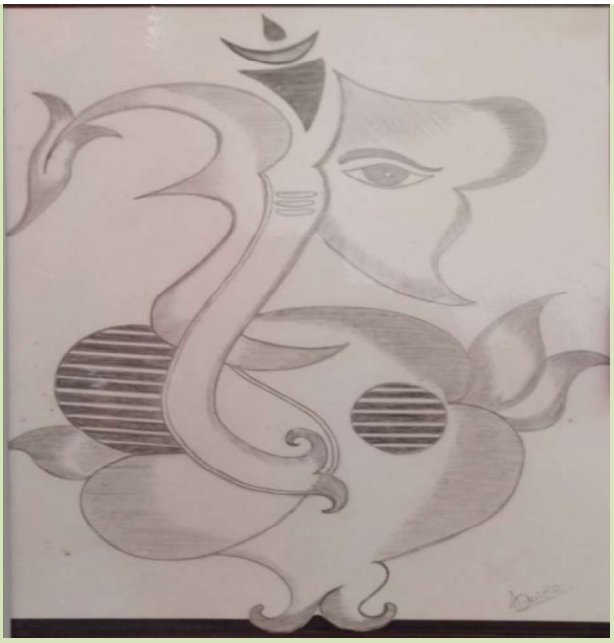
कंपनीने दिलंय वर्क फ्रॉम होम,
पण त्यातच आहे खरी गोम,
नुसतेच कॉल्स - कामाच्या नावाने बोंब,
सांगा तरी काय करायचं

म्हटलं जरा करावा व्यायाम,
बोरिंग रुटीनला नवीन आयाम,
गाळू दररोज बादलीभर घाम...
घामाचं माहीत नाही, पण वेळ बराच जातोय !
वाढू नये वजन, म्हणून दोनच टाइम खातोय !
तरी तो शनिरुपी काटा, ऐंशीच्या घरातच राहतोय !
सांगा तरी काय करायचं
टाळ्या थाळ्या वाजवल्या, दिवे पण झाले लावून..
नेक्स्ट टास्कची वाट पाहत, बातम्या झाल्या साऱ्या पाहून..
चिडून लाखोली अपशब्दांची, चीन निघाला आकंठ न्हाऊन..
सांगा तरी काय करायचं

परंतु -
जरी वाटे आहोत का ओलीस, आपलं जरा बरं आहे..
बाहेर पडणारे डॉक्टर आणि पोलीस,
हेच रियल हिरोज - एवढं खरं आहे !!

ह्यावर मात्र हे नाही विचारायचं,
की सांगा तरी काय करायचं,
आता फक्त एकच करायचं,
की येईना का फ्रस्ट्रेशन -
आपण फक्त घरातच राहायचं
आपण फक्त घरातच राहायचं

Mr. Deepak J. Ugale-Lecturer



Sakshi Halde- SYCO

The Dawn

Gentle rays of golden light
strays through the woolen curtians.
Tenderly falls onto the blankets
where delicately rests the youngling.

Fragile breaths that fill the
room.

Into a moment of chaos
A brief intermission from peace
That rises from the junior.

Bhavik D.Pawar-FYCO

Mrs. Priyanka Khairnar
Lecturer-Computer Engineering Dept.

DEPARTMENT OF COMPUTER ENGINEERING

E-Newsletter

Email-metpolycomp@gmail.com