

MONTHLY INSIGHTS

APRIL 2023

DEPARTMENT OF
INFORMATION TECHNOLOGY



Departmental Vision statement of Information Technology

To nurture the joy of excellence in the world of Information Technology

Departmental Mission statements of Information Technology

M1: To develop the critical thinking ability of students by promoting interactive learning.

M2: To bridge the gap between industry and institute and give students the kind of exposure to the industrial requirements in current trends of developing technology.

M3: To promote learning and research methods and make them excel in the field of their study by becoming responsible while dealing with social concerns.

M4: To encourage students to pursue higher studies and provide them awareness on various career opportunities that are available.



ARTICLES

Unleashing the Power of the Cloud

Cloud?

Cloud is a metaphor for the network of data centers that stores and compute information available on the Internet.

Cloud Computing:

Cloud computing is the on-demand delivery of IT resources over the internet with pay as you pricing. In the context of cloud, computing is the ability to process information, to store, retrieve, compare and analyse it and automate task most often done by computer program.

Benefits of Cloud Computing:

1. Pay as you go.
2. Benefits from massive economics of scale.
3. Stop guessing capacity.
4. Increased Speed and Agility.
5. Stop spending money running and maintaining datacentres.
6. Go global in minutes.

Essential Characteristics of Cloud Computing:

The essential characteristics of the cloud computing model were defined by the National Institute of Standards and technology (NIST) and have since been redefined by number of architects and experts. The cloud model is composed of five essential characteristics, three service models, and four deployment models.



Characteristics:

- On-demand self-service: A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider. This can be a storage space, virtual machine instances, database instances, and so on.
- Broad network access: Resources are available over the network and accessed through standard mechanisms (e.g., mobile phones, tablets, laptops, and workstations). In other words, cloud services are available over a network—ideally high broadband communication link—such as the internet, or in the case of a private clouds it could be a local area network (LAN).
- Resource pooling: The provider’s computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location independence in that the customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state, or data center). Examples of resources include storage, processing, memory, and network bandwidth.
- Rapid elasticity: Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time.



Cloud Deployment model:

Cloud Deployment Model acts as a virtual computing environment that offers a choice of deployment model according to how much data users want to store and who will have access to the infrastructure.

•Public Cloud Deployment Model:

As the name indicates, the public cloud is available for the general public who want to use computing resources such as software and hardware over the internet. It is a good choice for companies and organizations with low-security concerns.

•Private Cloud Deployment Model:

As the name suggests, Private Cloud lets you use the infrastructure and resources for a single organization. Users and organizations do not share resources with other users. That is why it is also called as Internal or corporate model. Private clouds are more costly than public clouds due to their costly maintenance.

•Community Cloud Deployment Model:

The community Deployment Model is somewhat similar to the Private cloud. In the private cloud, only one user or organization owns the cloud server. In Community Cloud, several companies with the same backgrounds share the cloud server. If all organizations or companies have the same set of security protocols and performance requirements, and goals, this multi-tenant architecture can help them save cost and boost efficiency.

KRISHNA GARG



TE IT



How will technology change our lives in twenty years?

Technology is advancing with each passing day. There are a number of new inventions coming daily which are made to make human life easy, but the big question here is what will it be after 20 years i.e. two decades from now. As we can see the evolution of daily new technology and trends it is sure that after two decades our world will be at a whole new level than it is today. Everything around us would be running with some of the other technology.

Below listed are the possible technological changes in various sectors that are sure to come after 20 years:

- **Reducing travelling time:** In the existing year 2018, we surely know about cars that are equipped with self-parking technology and even have an auto-driving mode. However, in the upcoming time technological advancement would be such that you would not even require to travel to places with longer distance because face to face and virtual conferencing will be on such a hike that anyone could travel the world virtually with such a great quality that it would not feel if the person is not present here. Apart from virtual technological advancement, the introduction to bullet trains and more advancement on them to lessen the travel time will make humans travel from one place to other in few minutes. Thus after 20 years, travelling will be at a completely new level no matter physically or virtually.
- **Making your day-to-day life easy:** Technologies has played a great role in making our life comfortable in comparison to what it was way back 20 years ago. We have the automatic alarm clock, reminders, automatic geysers, automatic AC functioning and what, not almost everything we use has some or the other kind of advancement. We are going towards an automated world where everything will work automatically, we just have to sit down and wait for the work to get complete.



- **Advancement in treatments:** 20 years from now we will surely see how the treatment and operations have become way easier and automatic than they are now. Earlier the eye surgery used to take a lot of time and hours but today we have laser technique, which hardly takes 15-30 minutes, and the surgery is complete. Similarly, there is much another technological advancement that made surgeries and treatments easy but after 20 years we would have it on a very top level with easier detection of disease as well as easy and quick treatment. Thus, the time is not far away when we will be able to see out blood pressure level, hormone levels, sugar levels, stress level and many more things going in our body.



Thus after 20 years from now, the technology will be at a completely new level not in few specific fields but also in fields of art, sports, cooking and anything humans can think of.





Companies Love Big Data But Lack the Strategy To Use It Effectively

Big data is a critical competitive advantage for companies that know how to use it. Harvard Business School faculty share insights that they teach to executives.

Data has always been important in business, of course. But with the arrival of digital data—its volume, depth, and accessibility—it has become clear it is key to helping companies develop sustainable competitive advantage.

“The new attention being given to data today is because suddenly, everywhere, it’s become much cheaper to measure,” says John A. Deighton, the Baker Foundation Professor of Business Administration at Harvard Business School. “Used well, it changes the basis of competition in industry after industry.”

The problem is that, in many cases, big data is not used well. Companies are better at collecting data—about their customers, about their products, about competitors— than analyzing that data and designing strategy around it.

That’s one reason eight HBS professors pooled resources in June to launch the Competing on Business Analytics and Big Data Executive Education program. “It was unprecedented to engage eight faculty in a single program,” says Deighton, “and it reflects the fact that data questions touch every part of the enterprise.”

The program drew C-suite executives and senior managers to look at how big data affects the supply chain, marketing, human resources, and other key business functions. Attendees studied how market-leading companies are harnessing data to reshape their companies, and explored how they can put data to work for them in ways that create value for their own businesses.



"IT IS BOTH STAGGERING AND EXCITING TO IMAGINE HOW DATA AND ANALYTIC CAPABILITIES WILL TRANSFORM ENTIRE INDUSTRIES"

Ferreira also shared results of a survey of about 350 companies in four industries about their analytics capabilities. "Results show strong correlations between business performance metrics and analytics capabilities, and highlight a variety of tasks in which top performing companies use analytics..."

Feng Zhu, who teaches Digital Innovation and Transformation, illustrated how big data is making new business models possible. "Most organizations today use data analytics to optimize or improve their existing businesses. But to take full advantage of data analytics, it will be important for them to consider the following two strategic questions: 1) Can I use my data to offer new products or services to my existing customers? 2) Can I leverage data to serve those customers who are currently not served by me or my competitors?"

In Lakhani's final case discussion, which explored internal and customer transformation at GE, it became clear that a data strategy wasn't just about gathering and analyzing information—it can be the unifying principle in corporate reinvention.

LEKHA PULAVARTHY



SE IT

Microsoft introduces 'Bing Image Creator' powered by DALL-E



- Microsoft has announced the deployment of Bing Image Creator to Bing preview users via Bing chat as well as the availability of the feature in Microsoft Edge for both desktop and mobile users worldwide in English.
- The company also revealed that it plans to integrate Image Creator into Edge via the new Bing button in chat mode in the preview version of the browser
- With Image Creator, users can generate images based on their descriptions, including additional context such as location or activity, and select an art style
- In addition to the aforementioned image generator, Bing will introduce two additional search capabilities:
- Visual Stories and Knowledge Cards 2.0 : According to Microsoft, these features are being made available to all Bing users to meet the growing demand for more visual search experience Knowledge Cards 2.0 is an AI-powered info-graphic like display that provides users with interesting facts and vital information in a quick, easily digestible format.
- The update includes interactive, dynamic content, such as charts, graphs, timelines, and visual stories.

NAYAK NITHYANANDA



FE IT



PLACEMENTS

In this month, many different companies visited the campus of XIE to recruit students from various different branches for a variety of positions in the company. The student from IT department who got placed in this month were:

Name : Riddhi Wakde

Company : Intellipaat

Package : 7.5 lakhs/-

Name : Shivam Mishra

Company : Intellipaat

Package : 7.5 lakhs/-

Achievements by our Faculty

Prof. Chhaya Narvekar was certified for being a reviewer in the 4th International Conference on Communication Systems, Computing and IT Application.



Prof. Sulochana Devi successfully completed NPTEL courses on Business Statistics and Machine Learning for Soil and Crop Management with a consolidated score of 70% and 86% respectively.





ACTIVITIES

Innovation Ignition

Event Date/Time: 06/04/2023 - 11.30 AM

Event Coordinators: Chhaya Dhavale. Details of Resource Person:
Nirmala Nitin Kamble , Prof. Suvarna Aranjo

Objectives: To organize an event to make students industry ready. Provide students a platform to show their innovative ideas and solutions to everyday problems.

The "Innovation Ignition" event organized by IIC-XIE is a platform for students to showcase their innovative ideas and projects. This aims to foster creativity and innovation among students by providing them with an opportunity to present their unique ideas and projects to a wider audience. Through this event, the IIC-XIE hopes to encourage and inspire students to pursue their passion for innovation and entrepreneurship, ultimately contributing to the growth and development of the society as a whole. First introduction of the judges was done by the host. Then 8 groups and solo participants presented their ideas in front of judges. They were given a timeslot of 8 minutes to pitch their ideas. After which a question round by judges was done. Few improvements were also suggested. The results were then announced. First 3 winners were announced. The event ended with vote of thanks and felicitation of judges.

Winners list:

- First : Arjun Singh Shishodia (TE-IT)
- Second: Atharva Gaikwad (SE-COMP)
- Third: Ahsaas Srivastava (TE-EXTC)

Event Photos:





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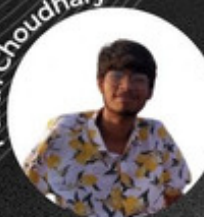
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