

WIE GAZETTE

WOMEN • TECHNOLOGY • INSPIRATION • EMPOWERMENT

IEEE Women in Engineering
Wie



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THEME- BIG DATA ANALYSIS

Big data is a term used to describe large amounts of information. In contrast to traditional structured data which is typically stored in a relational database, big data varies in terms of volume, velocity, and variety. It is capable of producing information about just about every aspect of your customer's life in the form of a data trail, and if analyzed correctly, can lead to a better understanding of their lifestyle and purchasing habits.

GLOSSARY

1. Automatic identification and data capture

Automatic identification and data capture (AIDC) refers to the methods of automatically identifying objects, collecting data about them, and entering them directly into computer systems, without human involvement.

2. Fuzzy logic

Fuzzy logic is a form of many-valued logic in which the true values of variables may be any real number between 0 and 1 both inclusive. It is employed to handle the concept of partial truth, where the true value may range between completely true and completely false.

3. Grid computing

Grid computing is a group of networked computers which work together as a virtual supercomputer to perform large tasks, such as analysing huge sets of data or weather modelling.

4. Hadoop

Hadoop is an open-source software framework for storing data and running applications on clusters of commodity hardware. It provides massive storage for any kind of data, enormous processing power, and the ability to handle virtually limitless concurrent tasks or jobs.

5. Load-balancing

In computing, load balancing refers to the process of distributing a set of tasks over a set of resources (computing units), with the aim of making their overall processing more efficient. Load balancing techniques can optimize the response time for each task, avoiding unevenly overloading compute nodes while other compute nodes are left idle.

6. MapReduce

MapReduce is a programming model for writing applications that can process Big Data in parallel on multiple nodes. MapReduce provides analytical capabilities for analysing huge volumes of complex data.

7. Metadata

Metadata is "data that provides information about other data". In simple words, it is "data about data"

8. OLAP

Online analytical processing is an approach to answer multi-dimensional analytical (MDA) queries swiftly in computing. OLAP is part of the broader category of business intelligence, which also encompasses relational databases, report writing, and data mining.

9. Predictive modelling

Predictive Modelling is a statistical technique in which probability and data mining are applied to an unknown event in order to predict outcomes.

10. Risk analysis

Risk analysis is a technique used to identify and assess factors that may jeopardize the success of a project or achieving a goal. This technique helps to define preventive measures to reduce the probability of failure.

Over the past few years, the promise of Big Data seemed elusive, but it started to materialize in 2020. Now the question at hand isn't *if* you will use Big Data in your business routine, it's *when* you're going to start using it (if somehow you haven't yet). Big Data is here to stay for the foreseeable future because we live and breathe data, and our pace of data generation will only escalate. Here's my look at two of the key trends that will influence how data and analytics are used this year.

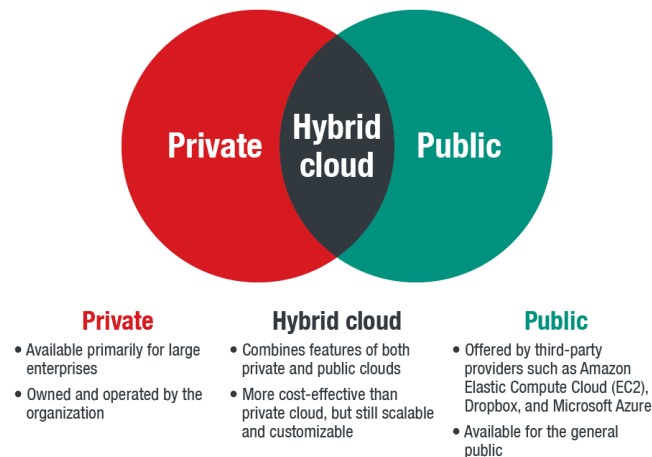


Image Credits: trendmicro.com

Hybrid Cloud

The cloud has been recognized as a transformational technology, over the past decade. It can access tremendous data stores and act on information in real-time without expensive infrastructures. This has fuelled the rise in applications and start-ups offering data-driven services on-demand, but most companies don't feel comfortable putting all of their data on the cloud for several reasons, including security, poor latency, privacy, among many others. Hybrid Cloud offers a solution by combining a private cloud service with another public cloud service, that requires proprietary software enabling communication between each distinct service. Public cloud services are offered by third-party vendors. The hybrid cloud strategy connects public clouds to private clouds, creating a single cloud infrastructure that handles all of a company's computing workload, creating a holistic network.

DataOps

DataOps is a methodology and practice that borrows from the DevOps framework but is aimed at different processes. DataOps is concerned with the flow of data, end-to-end through an organization. In particular, this means removing obstacles that limit the usefulness or accessibility of data starting from data ingestion, preparation, analytics and ends with chart creation, reports, and insights. With no formal training required, DataOps undertakes data processing concepts for employees who are less familiar with the data flow. This expansion of the role offers a great opportunity for anyone with experience or interest in an IT career who wants to work on more exciting and innovative projects. It allows people to focus more on domain expertise and less on how data runs through systems. The growth in popularity of "DataOps-as-a-service" vendors can also be predicted, offering end-to-end management of data processes and pipelines on-tap and pay-as-you-go.

These two trends barely scratch the surface of what big data is capable of. We'll soon be able to see more practical applications of big data to solve some of the human race's biggest problems.

The Evolution of Big Data

- 1981 – The beginning of PC generation.
- 1983 – IBM released DB2, its relational database management system.
- 1985 - Object-oriented programming languages started to become popular.
- 1990 - The first Internet searching tool, Archie, was created.
- 1991 - The World Wide Web, using HTTP and HTML started to appear as public services.
- 1993 - The World Wide Web's first primary search engine, W3Catalog, was released.
- 1995 - Sun released the Java platform (Java language was invented in 1991).
- 1998 – Carlo Strozzi developed an open-source relational database called NoSQL and Google was founded.
- 2002 – Amazon Web Services (AWS) launched as a free service and DARPA begins to work on its Total Information Awareness System.
- 2003 - The amount of information created in this one year by computers and other data systems outshined the amount of information created until this point.
- 2005 - Apache Hadoop was created and was destined to become a foundation of government big data effort.
- 2008 - The number of devices connected to the Internet exceeds the world's population.
- 2011 – Facebook launched the Open Compute Project to share specifications for energy-efficient data centers. IBM's Watson scanned and analysed 4 TB of data in seconds, defeating 2 human players on Jeopardy and Work began in UnQL (A query language for NoSQL databases).
- 2013 – The Obama administration announces the Big Data Research and Development Initiative.
- 2015 – Massive build-out of data centers was led by Google and Microsoft.
- 2017 – Huawei and Tencent joined Alibaba in major data center build-outs in China.
- 2018 – Silicon photonics technology started to positively impact data center networking architectures.
- 2020 – Edge computing will revise the role of the cloud in key sectors of the economy.
- IDC and EMC report predicted that, by 2020, the digital world would hold 40 ZB which exceeds previous predictions.

Dr. Fei-Fei Li:

Dr. Fei-Fei Li is the first in sequence as Sequoia Professor in the Computer Science Department at Stanford University, and Co-Director of Stanford's Human-Centered AI Institute. She filled in as the Director of Stanford's AI Lab from 2013 to 2018. Furthermore, during her holiday from Stanford from January 2017 to September 2018, she was Vice President at Google and filled in as Chief Scientist of AI/ML at Google Cloud. She joined Stanford in 2009 as an associate educator.

Fei-Fei Li's obligation to utilizing man-made consciousness for great is the through-line long resume: She fills in as co-overseer of the Stanford Institute for Human-Centered Artificial Intelligence, an establishment devoted to progressing interdisciplinary grant in AI research, training, strategy, and practice in manners that advantage humankind. She is likewise a fellow benefactor and executive of the philanthropic association AI4ALL, which is centered around expanding variety, consideration, and availability in AI schooling. She moreover fills in as a co-chief and co-head agent at the Stanford Vision and Learning Lab, where she works with understudies and associates worldwide to construct keen calculations that let PCs and robots "see and figure" as we do, and directs psychological and neuroimaging trials to find what we can gain from our own cerebrums regarding the matter.



For her interestingly inventive, opportune, and effective work, Li was chosen as the 2019 beneficiary of the National Geographic Further Award, which perceives a pioneer pushing the limits of their field. The Further Award respects Li's demand that this is the ideal opportunity, like never before previously, to "saddle our innovativeness just as our mankind." Inspired by Li's interest in central issues ("What is life? What is human existence? What is intelligence?"), we attempted to gain proficiency with somewhat more about what rouses her interest with man-made brainpower.

An unprecedented pioneer in AI through her progressive PC vision research, Fei-Fei has had ground-breaking industry sway democratizing AI, spearheading future mechanical developments, and supporting variety in STEM and AI globally.

Fei-Fei is the lead innovator of ImageNet, an assortment of 15 million absolutely marked photos coordinated into 22,000 classes, which cutting-edge machine vision through serious exposure to the visual world. ImageNet was by a long shot the biggest freely accessible dataset at the hour of its delivery in 2009, and its phenomenal profundity and detail had a transformative effect on a class of calculations known as Convolutional Neural Networks.

Analysts immediately perceived the force of neural organizations and enormous information to convey comparative forward leaps in their own fields, and it before long got regular to hear discuss "the ImageNet of X" as they attempted to duplicate Fei-Fei's accomplishment in areas like radiology, music, discourse preparing, and self-sufficient vehicles.

Notwithstanding her specialized commitments, Fei-Fei is the main backer for variety in STEM and AI. She was the instrumental voice encouraging the Stanford Computer Science Department to set up its first historically speaking division wide variety board of trustees. She helped to establish the Stanford AI Lab Out Reach Summer program (SAILORS), a yearly fourteen-day camp that acquaints secondary school young ladies with AI and urges them to think about it as a lifelong way.

LEARNING GUIDE

According to <https://www.datarobot.com/wiki/data-science/>, Data science is the field of study that combines domain expertise, programming skills, and knowledge of mathematics and statistics to extract meaningful insights from data. Since the demand for data scientists is increasing exponentially as organizations are keen to remain competitive in the age of big data, the need of learning data science has become even more important than before. Similarly, Data analytics, which is the science of analysing raw data in order to make conclusions about that information as defined by <https://www.investopedia.com/terms/d/data-analytics.asp> is also an important topic to explore because of the high demand and various benefits it offers in increasing our existing skillset including, problem-solving skills. Finding the right resources is a crucial part of learning, This list of tutorials and playlists provides basic and intermediate information on concepts of Data Science and Analytics. It is to help students and working professionals who are complete beginners.

1. TUTORIALS

- https://www.w3schools.com/datascience/ds_introduction.asp
- https://www.tutorialspoint.com/python_data_science/index.htm
- <https://www.kaggle.com/kanncaa1/data-science-tutorial-for-beginners>
- <https://www.datacamp.com/tracks/data-scientist-with-python>
- <https://tutorials.datasciencedojo.com/>
- https://www.tutorialspoint.com/excel_data_analysis/data_analysis_overview.htm
- <https://data-flair.training/blogs/data-analytics-tutorial/amp/>
- <https://www.datacamp.com/tracks/data-analyst-with-r/>

2. PLAYLISTS

- <https://youtu.be/X3paOmcTjQ>
- <https://youtu.be/-ETQ97mXXF0>
- <https://youtu.be/aGu0fbkHhek>
- <https://youtu.be/u2zsY-2uZiE>
- <https://youtu.be/LHBE6Q9Xlzl>
- <https://youtu.be/7WRIYJFG7YI>
- <https://youtu.be/fWE93St-RaQ>
- <https://youtu.be/oQmxQh92Nh8>
- <https://www.linkedin.com/learning/learning-data-analytics-2>

3. RECOMMENDED BOOKS

- Data Science For Dummies-*Lillian Louise Pierson*
- Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython-*Wes McKinney*

4. CERTIFICATION COURSES

- [IBM Data Science Certification \(Coursera\)](#)
- [MIT Data Science and Statistics Certificate \(edX\)](#)
- [Beginner Statistics for Data Analytics - Learn the Easy Way!](#)
- [Big Data Analytics -edX](#)

MYTH BUSTER

1. **More data is better:**

Investing in more data instead of decent data management can be risky as it leads to over-optimized systems built to suit a certain set of data values. With changes in the data range, these models or systems can crash. Usually, people think that more data means more accuracy but actually, improving data processes, data governance, and understanding data quality proves to be more beneficial. It can lead to potential oversights.

2. **You need a billion-dollar data budget:**

Data analytics is now easily accessible as the cost for data storage has decreased with the introduction of cloud platforms like Amazon AWS and Google. Multiple software packages don't have to be bought anymore and IoT platforms can be utilized for collecting data.

3. **Data Analytics is only for online companies:**

Although online tech companies like Google have engendered a mammoth amount of revenue, they make a very small percentage of companies worldwide. Data analytics are not a vital component of many products or services but do play in the decision-making process. For example, Domino's Pizza's marketing campaigns are supported by data foundations converting it from an authentic pizzeria to a technological restaurant!

4. **Data Analytics can predict the future:**

Predicting future actions if a data management strategy does not include a master component reinforced by data analytics. It's based on probability analysis and recommendations which can raise false confidence. There is human involvement, and miscalculations can occur, thus not promising 100% accuracy. Big data is thus a support function and can enable predictions. The ultimate decision-making process revolves around interpreting patterns and relationships and big data analytics assist in revealing said patterns from data points.

5. **Machines are better than humans:**

"Machine algorithms will replace humans forever!" Human insight and intelligence surpass machines and such tools are operated by data analysts. Machine algorithms fail to provide unique reasoning as humans do. Robots do not have the creative capability that lies with humans in the decision-making process. Humans are thus a principal part of the equation as machine learning models are built with the help of data scientists and certain values of set data. Machine learning and Artificial Intelligence can be implemented but not without human involvement.

Big data and analytics is a critical asset for public and private corporations nowadays. With the help of the development of cloud software, companies can now track and analyse volumes of business data in real-time and make the required adjustments to their business processes accordingly.

Here are a few gadgets invented using Big Data Analytics that make our lives easier.

1. **Smart trash cans that make grocery lists old fashioned**

Big data is actually making grocery lists old. Unlike Alexa which operates on big data and AI, big data has created smart trash cans too. Everyone has been in the situation of finishing a carton of milk and forgetting to add it to their grocery list. It's simply a part of daily life. Smart trash cans are a complicated project that uses big data to customize grocery shopping so that you never forget to buy an item again. Working with Amazon's Dash Replenishment Service, many creators have introduced trash cans that help automatic reordering. This way, whenever the consumer throws something in the bin, the gadget scans the barcode and immediately adds to their shopping list on Amazon.



2. **Smart bedside lamps that improve sleeping habits**

Big data can help improve our sleeping habits as well, which is something that will surprise most people. Alarms and lights that wake you up might not sound very convenient, but smart bedside lamp producers are hoping to help people improve their sleeping habits. These gadgets have been on the market for a while now, but their usefulness was limited to lighting up in different colors. Due to the growth of data, smart bedside lamps learn the user's sleeping patterns and adapt in such a way as to benefit them sleep better and wake up well-rested.



3. **Smart music players for kids' entertainment in a secure environment**

The use of Artificial Intelligence and Big data in online music streaming services such as Spotify and Apple Music is already known, but the same technology can be used for kids as well. Music has been proven to have a beneficial impact on children's emotional and intellectual development, but the main issue that parents have is that they are scared of letting their kids use mobile from a young age. Smart music players like Jooki want to solve this. This one gadget can be linked to the parent's Spotify playlist, but the kid doesn't need any kind of device to access it. This way, kids can get all the benefits of listening to music, without exposure to electronics.



Big Data is developing many new devices that will help us better in the future.

SUMMARY

Big Data- Gone with the Cloud

“Cloud computing offers individuals access to data and applications from nearly any point of access to the Internet, offers businesses a whole new way to cut costs for technical infrastructure, and offers big computer companies a potentially giant market for hardware and services.” -Jamaïs Cascio

We've all worked on documents, PPTs, etc. in Microsoft 365, streamed movies, serials, and what not on Netflix, stored miscellaneous items on our Google Drive, uploaded visual media on Facebook at some point in our lives, but have you ever wondered on what framework this entire digital empire runs on, for it to be so versatile, co-ordinated and intricate? The answer lies within a very interesting concept known as Cloud Computing.

What is Cloud Computing?

Cloud Computing is essentially the conveyance of a la carte computing services like processing power, data storage, retrieval and backup, audio and video streaming, database management, networking facilitation, and much more that operate through the cloud aka, the collection space of every internet-based component accessible to the user through cyberspace. This basically means that users can access internet-based services as long as they are connected to the web without being required to do all the background work including processing and organization of the data. For information on the formation, development, and ideas in cloud computing visit the following website: <https://itchronicles.com/what-is-cloud-computing/>

Types of Cloud Computing

There are three primary types of cloud computing, namely Software-as-a-Service (SaaS), Infrastructure-as-a-Service (IaaS), and finally Platform-as-a-Service.

1. Software-as-a-Service(SaaS)

This type involves the licensure of centrally managed software, modelled as per the client's needs, to the client themselves over the internet. Real-life examples of this cloud computing model include Cisco WebEx, Microsoft Office 365, Dropbox, and Zendesk.





2. Infrastructure-as-a-Service(IaaS)

This type works on the delivery of virtualized network infrastructure components and automated services that include accessing servers, storage, networking, and much more. Examples of this model include ServerCentral, Microsoft Azure, CenturyLink Cloud, and Digital Ocean.

3. Platform-as-a-Service(PaaS)

This type essentially provides the necessary platform and resources that allow the user to develop, run and manage softwares of their choice without having to work on and maintain the underlying infrastructure itself. A couple of examples for this would be Heroku, AWS Lambda, Apprenda Cloud Platform, and IBM Cloud Foundry.

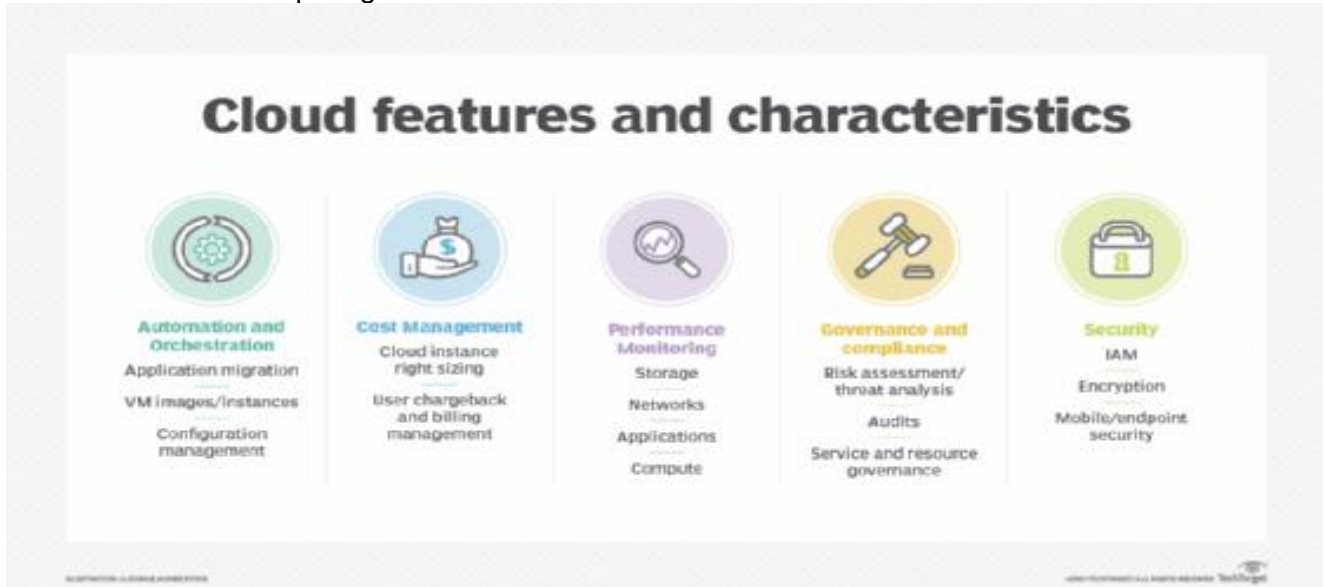
Summary of Key Differences

 On-Premises	 IaaS Infrastructure as a Service	 PaaS Platform as a Service	 SaaS Software as a Service
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

SUMMARY

Characteristics of Cloud Computing:

There are several features that contribute to Cloud Computing's popularity. Here, we will talk about the 10 main characteristics of Cloud Computing that make it the versatile structure it is.



1. Simplistic Maintenance

With regular, compatible, and rapid updates and little or no downtime servers, networks and databases can easily be maintained without strenuous effort.

2. Economical Efficiency

Being a one-time investment with regard to the specifics of data storage and servers with very little maintenance and follow-up expenses, cloud computing involves a relatively cost-effective budget.

3. Extensive Security

Cloud Security creates and stores copies of the data in case of server damage, data loss or corruption, and any other detrimental effect that can be restored using an unaffected server. Moreover stringent measures against theft and hacking and applied in servers.

4. Broad Network Access

With a compatible device and internet connection, cloud computing services, data transfer and so much more can be done in and to any suitable location.

5. Resource Pooling

Resources can be shared among users, with each one receiving their requirements tailored to their specifications. Through this resource, providers can give to their clientele, services from a pool, that are assigned to each one, based on their needs.

6. On-demand Self-service

Users can easily access and monitor their computing services, capabilities, data storage distribution and the specified allotment of it and so much more, thereby cutting off the dependency of the user on the provider for such information and monitoring access.

7. Measured Services

Cloud systems can apply an effective surveillance system to obtain data regarding the service utilization, data storage and consumption, and resource usage that is reported to the user.

8. Prompt Elasticity

Applications, storage units, resources, processing units can be easily accessed and can be instantaneously adjusted when and as the need arises.

9. Automated System

Cloud systems automatically configure, run, and maintain cloud services according to the designated virtual environment, thereby eradicating the need for any form of manual effort.

10. High Scalability

Extensive workloads can be scaled as per requirements to run the entire process within a short span of time without unnecessary cost extensions.

SUMMARY

Cloud Computing and Big Data

Given all its useful and applicable features, Cloud Computing is being widely utilized in correlation with Big Data. Big Data involves the analysing, processing, and organization of immense amounts of data with exponential growth that would otherwise be too complex to work within existing, basic data processing softwares. With the extensive computing capabilities and distributed storage resources of Cloud Computing, Big Data and all its subsidiaries can be managed, processed, and utilized effectively

Big Data and Cloud computing's disentanglement, then again, is the essential clarification for their far and wide corporate selection.

Hadoop is one of the most widely deployed applications for big data processing. It's a MapReduce implementation that allows massive, heterogeneous datasets to be processed in a distributed manner. There are various options for transferring Hadoop to the cloud. For instance, Amazon's "Versatile Map Reduce" shows how Cloud Elastic Computes can be utilized to deal with a lot of information.

The size of the information is 'large'. Accordingly, to store this information, a huge and versatile extra room is required. Also, the standard analytics algorithms are computing-intensive. In this manner, an infrastructural arrangement that can uphold this degree of calculation is required. The cloud meets both these prerequisites. Big Data aids management decisions while Cloud handles nearby applications. Big Data is utilized to store and handle a lot of coordinated, semi-organized, and unstructured information for information preparation.

Some technologies that use this concept are:

1. Amazon's offerings include S3 (Data storage/file system), SimpleDB (non-relational database), and EC2 (computing servers).
2. Rackspace's offerings incorporate Cloud Drive (Information stockpiling/record framework), Cloud Sites (website hosting on the cloud), and Cloud Servers (computing servers).
3. IBM offers Smart Business Storage Cloud and Computing on Demand (CoD).
4. AT&T gives Synaptic Capacity and Synaptic Process as a help.

Challenges and Opportunities:

To endorse high market value solutions, technologies must be realistic. However, there is a range of non-technical problems with cloud-based big data systems that must be resolved before mainstream implementation can be anticipated. The shortage of generic and common options has a significant impact on the technology's market value.

Businesses are finding it difficult to move to big data systems due to a shortage of qualified resources and debugging-testing strategies.

One of the most pressing issues when combining big data analytics and cloud computing is stability. As a result, external issues such as protection and privacy threats arise and must be resolved before continuing.

Cloud-based big data analytics applications that are economically feasible and realistic can be created and implemented.

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1. <https://www.jigsawacademy.com/blogs/cloud-computing/characteristics-of-cloud-computing/>
2. <https://www.investopedia.com/terms/c/cloud-computing.asp>
3. <https://getnerdio.com/academy/10-popular-software-service-examples/>
4. https://www.ripublication.com/ijaer17/ijaerv12n17_89.pdf
5. <https://www.bmc.com/blogs/saas-vs-paas-vs-iaas-whats-the-difference-and-how-to-choose/>
6. <https://www.visma.com/blog/cloud-basics-the-layers/>
7. <https://data-flair.training/blogs/big-data-and-cloud-computing-comprehensive-guide/>



1. **Where does big data come from?**

Big data is often boiled down to a few varieties including social data, machine data, and transactional data.

2. **Is Big Data a new trend?**

Well, not exactly. Though there's a lot of recent buzz, big data has been around for a long time. Think back to when you first heard of scientific researchers using supercomputers to analyse massive amounts of data. The difference now is that big data is accessible to regular BI users and is applicable to the enterprise.

3. **What are the five V's of Big Data?**

Volume – Volume represents the volume i.e. amount of data that is growing at a high rate i.e. data volume in Petabytes

Velocity – Velocity is the rate at which data grows. Social media contributes a major role in the velocity of growing data.

Variety – Variety refers to the different data types i.e. various data formats like text, audios, videos, etc.

Veracity – Veracity refers to the uncertainty of available data. Veracity arises due to the high volume of data that brings incompleteness and inconsistency.

Value – Value refers to turning data into value. By turning accessed big data into values, businesses may generate revenue.

4. **Is big data analysis helpful in increasing business revenue?**

Big data analysis has become very important for the businesses. It helps businesses to differentiate themselves from others. This in turn helps to increase the revenue. Big data analytics enables businesses to launch new products depending on the needs of the customer and their preferences. These factors make businesses earn more revenue, and so companies are using big data analytics.

5. **Why is Hadoop used for Big Data Analytics?**

Hadoop is open source and runs on commodity hardware. Therefore, it is a cost-benefit solution for businesses. Analyzing unstructured data is very difficult and this is where Hadoop helps with its capabilities of storage, processing and data collection.

6. **Are Hadoop and Big Data co-related?**

Yes, they are related but they are not alike. Big Data is an asset, while Hadoop is an open-source software program (framework in Java). Hadoop accomplishes a set of goals and objectives to deal Big Data. Hadoop is used to process, store, and analyse complex unstructured data sets through specific proprietary algorithms and methods to derive actionable insights.

7. **What are some of the important tools useful for Big Data analytics?**

NodeXL, KNIME, Tableau, Solver, OpenRefine, Rattle GUI, Qlikview

Domain: Technical

We all know it's a herculean task to manage a club and ensure its success. IEEE-WIE being a technical chapter, it is extremely essential for the efficient operation of the technical department parallel to the other departments. The technical department as of now is subdivided into 2 categories- Technical and Projects. I've had the opportunity to talk to two-spirited and confident women- Jhansi and Ankita who've shared their insights on how the technical department functions and their responsibilities as the department heads.

Ankita Mandal, the technical head of IEEE-WIE is a person who is passionate about her job and is a very pleasant person to talk to.

Q1. Could you give me an overview of the duties and responsibilities you hold as the technical head?

Ankita: WIE is essentially a technical chapter and everyone who wishes to join this chapter hopes to learn something applicable and beneficial. Our duty is to provide a place where you could get immense technical knowledge and grow as a person. We make an effort to guide our juniors not only in gaining more technical skills but also help them strive and do well in college overall. We wish to be mentors to the juniors just in a way our seniors were mentors to us. Ever since I joined WIE, I've always had the support system of my seniors helping me in any way in college and I wish to be the same for my juniors.



Q2. What is the functionality of the department?

Ankita: The technical department has a range of subdomains under it. The domains being web and app development, ML and AI, UI and UX, and data structures and algorithms (DSA). The members of the department can choose a domain of their interest and work on projects. We have given them a list of projects and they're given the freedom to choose any and work on them. We have a practice of conducting night sessions where we discuss the progress of each person's projects and help them if they find anything difficult. We also conduct sessions time-to-time and whenever we plan to have a session, we first inform the management head and then proceed.

Q3. What parts of the job do you find most challenging?

Ankita: Apart from the responsibility of ensuring the smooth functioning of tasks, projects, and events we conduct, we also have the responsibility of ensuring that everyone learns something and is satisfied with it at the end of the day. I think the challenge is in making sure that there is no gap between what the members want to learn and what we are guiding them towards.

Q4. Could you tell us something about the projects you've been working on recently or any future projects?

Ankita: We have a system where everyone has to do at least one project in a month and it is mandatory. By the first week of April, we have a list of projects that are to be completed. Members have been paired and they're working on their projects. A project review session has also been done. We also have a couple of sessions coming up, we previously took up sessions on Github and blockchain.

Q5. Considering all the people you've met in WIE, what are some of the important things you've learned?

Ankita: Our previous technical head was a very sweet person who was also extremely knowledgeable. She shared resources to learn and was a great mentor to us. I implemented that idea of sharing resources with everyone by taking inspiration from her. Not only that, the idea of night sessions as well came from her. I personally feel night sessions are super helpful as they feel a little less formal as compared to the morning sessions and the learning is maximized.

play a huge role in the learning process and it's under my discretion that I make sure projects are being planned, assigned, and executed. I research the projects first and then give a list of projects under each domain. The members are free to choose any project from any domain they want.

Jhansi Birru, the projects' head of IEEE-WIE is resourceful, clear-sighted, and amicable.

Q1. What are your duties and functions as the project head?

Jhansi: Projects play a huge role in the learning process and it's under my discretion that I make sure projects are being planned, assigned, and executed. I research the projects first and then give a list of projects under each domain. The members are free to choose any project from any domain they want.

Q2. Could you briefly describe the workflow?

Jhansi: At present, I have given several projects under each domain, there are 4 projects for ML and AI, 4 for web development, and 3 for app development. A google form was circulated to know which domain each member wanted to work on. For the first two months, they were urged to do small projects but later they will be teamed into groups of 4-5 to undertake big projects. For web and app development, senior core members volunteered to mentor a specific project. We also have review sessions every week and the members report to me about their progress and I try to help them out if they're stuck somewhere.



Q3. What parts of the job as the project's head do you find most challenging?

Jhansi: I'd say the difficult aspect would be able to cater to the needs of each member. Everyone would come up with doubts and problems and clearing them all and helping them through is challenging.

Q4. Are there any upcoming projects? If yes, could you give us an overview of them?

Jhansi: We have big projects coming up and again, the choice is given to the members. Everyone will be given the freedom to explore and build projects that they're interested in. Since they will be in teams of 4-5 members, they were asked to submit a report with proper formatting giving details about their contribution and key-takeaways. We're still thinking about the big projects that we're gonna undertake but it's a work in progress.

Q5. Considering all the people you've met in WIE, what are some of the important things you've learned?

Jhansi: There are a lot of things that I've learned from the people here. Especially a member of the junior core, she has immense knowledge and thirst to know more for someone in their first year. Looking at the way she works, I feel all the more motivated to work and guide her towards her goals. She is a box full of ideas and makes me want to think like her and talk to her more. WIE is overflowing with talent and every time you talk to someone from here, you learn a lot.

STAR PERFORMERS

1. Design:

Shruti Garg, from the Bioinformatics Branch of the Computer Science Department, has been an active member in the design domain, promptly submitting her designs for the posters and initiating various ideas as well. Creative and duty conscious at the same time, Shruti has been awarded the member of the month, for the design domain, by the board, for her contributions and the way she has coordinated within the team. Great going, Shruti!



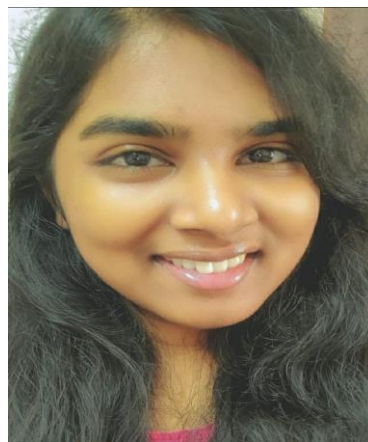
2. Editorial:

Saipriya Rajagopal, an aspiring writer has contributed to the editorial department by writing down captions for many of the Instagram posts of our chapter and volunteering for almost every meeting to jot down the Minutes-of-Meeting. Saipriya has written three articles for the article repository of WIE and has done a great job in all three pieces. Choosing her as the member of the month glorifies her wordsmanship. Keep hustling, Saipriya!



3. Management:

Kavipriya A, from the Computer Science and Business Systems branch, has worked earnestly in the management domain. She has attended various domain-exclusive and general meetings and has voiced her thoughts actively in all of these. Also, Kavipriya has brought in the questions for tech trivia, representing the management domain, and bringing laurels to the same. WIE takes pride in acknowledging her as the member of the month for the management department. Best wishes, Kavipriya!



4. Technical:

“Develop a passion for learning. If you do, you will never cease to grow.”, says Anthony J. D’Angelo. Tisha Chawla, from the Technical Domain, stands true to these words. She has worked on various projects assigned to her successfully and has created an impressive portfolio website. Also, Tisha has executed her blockchain task really well and has submitted it well ahead of time, thus earning the title ‘Member of the Month’ for the technical domain. Apart from her tech work, Tisha has recently joined the Editorial domain too! Awesome work, Tisha!



EDITORS



Vrushali Deshmukh- Editor-in-Chief



Saubhagya Sooradas



Rulakshitha M.



Harika Naishadham



Saipriya Rajagopal



Muskan Bansal



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