Lyallpur Khalsa College Technical Campus

Cantt. Road, Near Bus Stand, Jalandhar

STUDENT AREA NETWORK

Vol. 2 Issue No. 2

Note: Students can send articles for next issue at articles@lkcengg.edu.in

Pathway to SUCCESS

Vision of the Institute

To contribute to the region & the country at large through innovative excellence in experimental based scientific and technical education with a focus on research so as to be a valuable resource for the corporate world and the humankind and to become a source of pride of all countrymen.

Mission of the Institute

To impart quality education and training and to carry out research in consonance with the vision of the Institute , by providing state-of-the-art infrastructure and a learner friendly atmosphere in synergy with innovative pedagogy and global networking; to produce world class and socially responsive academicians, leaders and practitioners in various disciplines.

Vision of the department

To groom students into competent engineers and entrepreneurs, by inculcating technical education, ethical and moral values through measurable and continuous improvement methods.

Mission of the department

1. To model students ready for industry by grooming their employability skills using academia and corporate collaboration.
2. To blend theoretical knowledge and practical applications with the aid of trainings, peer learning and sound academic practices.
3. Cultivate leadership skills, social awareness, and responsibility among the students through various co-curriculum and extra curriculum activities.
4. To encourage the involvement of faculty in pursuing their own academic excellence through the aid of faculty development programmes, short term training programmes, seminars, workshops, etc.

PROGRAMME EDUCATIONAL OBJECTIVES

PEO1: To provide the basic knowledge of engineering concepts and fundamentals to computer graduates by logical and practical approach for problem solving and function effectively as a skilled computer engineer and pursue their higher education or emerge as an entrepreneur.

PEO2: To inculcate creative abilities by imparting knowledge and skills to analyze, design, test and implement various software applications.

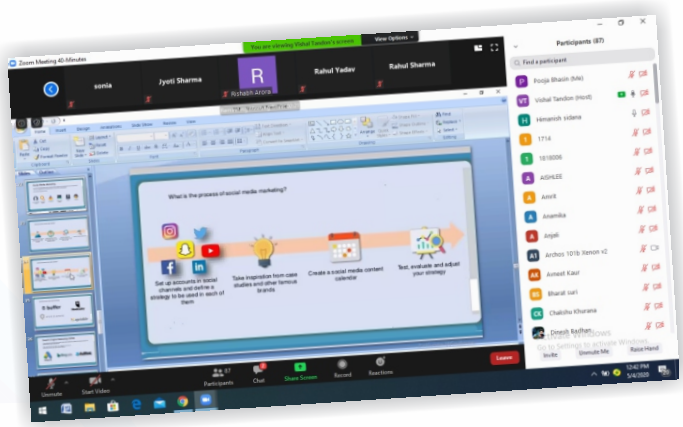
PEO3: To instill leadership capabilities, social-economic orientation, commitment to one's profession, professional ethics and community services for the protection of environment.

ACADEMIC ACTIVITIES/EVENTS
ORGANISED BY THE DEPARTMENT

Online Expert talk by
Mr. Vishal Tandon, Team Leader, Netsmartz, Mohali

In the midst of COVID 19, in order to facilitate students' learning and interaction, CSE department of LKCE organised an expert talk on **'Digital Marketing'** on 4th May, 2020 by Mr. Vishal Tandon, Team Leader, Netsmartz, Mohali. The resource person apprised the students about the existing scope of Digital Marketing and emphasized on the importance of Digital Marketing in changing world of Social Media influence. He discussed with the students on running successful advertisement campaigns on Instagram, Twitter, and Facebook.

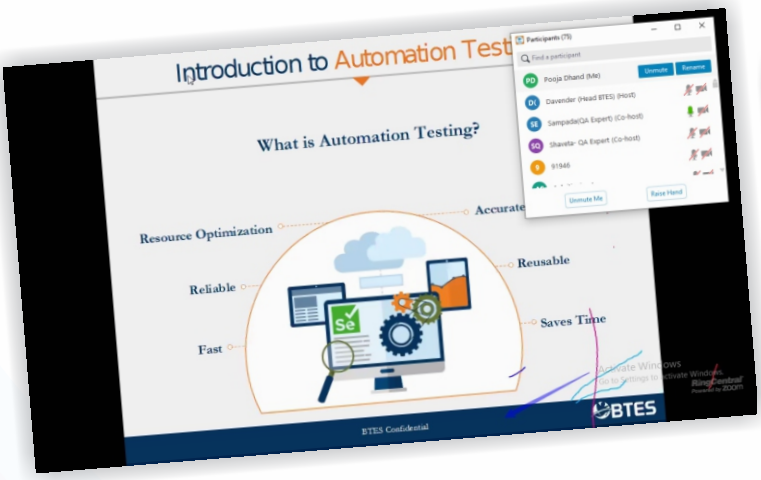
The webinar was attended by more than 90 participants. S. Sukhbir Singh Chatha, Director Academic Affairs, put forth his views that these kinds of webinars are very much needed for making student aware about digital marketing as one of the career prospects. Dr. D. S. Deol, Dy. Director (AA), KCL Group appreciated the efforts during these unprecedented times and focused on establishing robust distance teaching and building competencies for quality online learning practices. Dr. D. S. Rao, Director, LKCE appreciated the synergy and enthusiasm of the students as well as the efforts of departments for organizing such online events.



Workshop by
BEBO TECHNOLOGIES ON SDET AND AUTOMATION

To expand and enhance the vision of students that how emerging technologies are currently changing and the potential technological transformations in the days to come is going to affect our lives, an initiative was taken by CSE and ECE dept. to organize an online workshop on 'Emerging Technologies' by BTES under the flagship of Bebo Technologies Pvt. Ltd. on 9.05.2020.

The topic of workshop was Software Testing and Automation. More than 80 students participated in the workshop. Mr. Navdeep from Bebo Technologies provided full support and cooperation to engage the students during lockdown. Mr. Davender, Ms. Sampada and Ms. Shaveta from Bebo Technologies were resource persons for the day. It was an interesting and relevant workshop which proved to be a great platform for students to express, interact, and engage themselves.

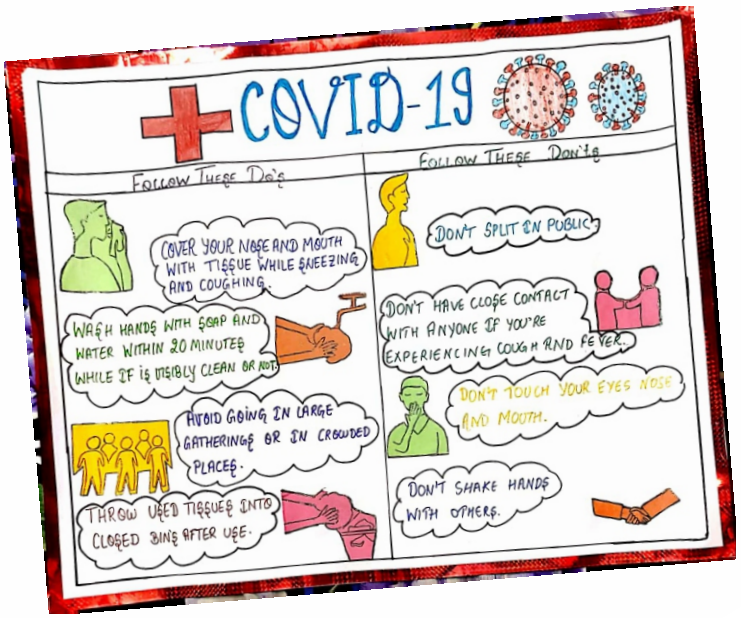


SLOGAN WRITING COMPETITION

Making productive use of the critical ongoing time due to COVID-19, Department of CSE, LKCE, Jalandhar organized "Online Slogan Writing Competition" on 11th May, 2020, on the topics 'Think Positive' and 'Learning during COVID-19'.Students from LKCE and other colleges and schools participated enthusiastically and shared their views through beautiful slogans.

The Director Academic Affairs, S. Sukhbir Singh Chatha, appreciated the students for enthusiastically participating in the event and said that these activities kindle a light of optimism and make the youngsters to think positive during crucial time.

The Deputy Director A.A., Dr. R.S. Deol and Director LKCE, Dr. D.S Rao also congratulated the winning students.



AD Designing Competition

In view of accelerating the thought process and skill development during the critical period of lockdown due to COVID-19 and providing a platform for 'Learning during COVID-19', Department of CSE , LKCE, Jalandhar organized "Online Ad Designing Competition" on 15.5.2020. Students from LKCE and other colleges and schools participated enthusiastically and shared their ideas via Ads. Below are the details of top three position holders:

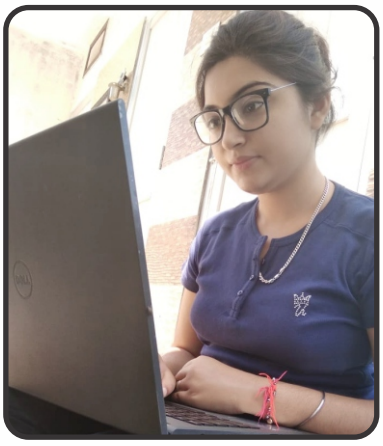
Sr. No.	Organization Institution Name	Name	Class	Semester	AD (CODE)	Result
1	LKCE, Jalandhar	Sukhraj Singh	ECE	8th	ad10	First
2	LKCE, Jalandhar	Rajvir Singh	CSE	4th	ad5	Second
3	LKCE, Jalandhar	Shashank Malhotra	CSE	2nd	ad12	Third

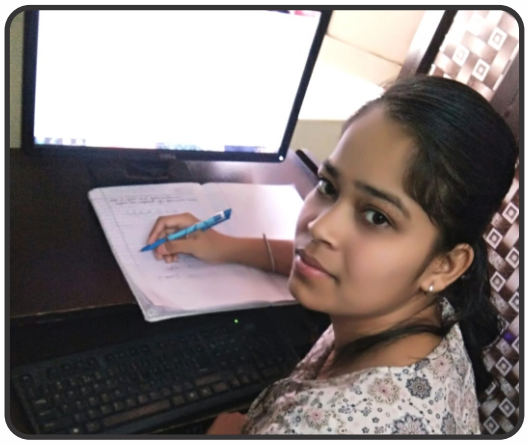
Employability Test-
an ONLINE APTITUDE TEST

Providing the student a platform and utilizing the lockdown period due to COVID-19 in a constructive way, Department of CSE, LKCE, Jalandhar organized **"LKCE Employability Test" -** an online aptitude test on 16th May, 2020 to provide students a chance to evaluate and enhance their employability skill .Students from CSE 6th semester participated enthusiastically and scored well. Students were appreciated for their active participation and making optimal efforts to enhance their skills to get ready to face the upcoming challenges.

Top Scorers for Employability Test

SNo	Name of Student	Scores out of 25
1	Ranjna	25
2	Sandeep Kaur	25
3	Kamaljit Kaur	25
4	Naresh Kumar	25
5	Rohit Singh	24

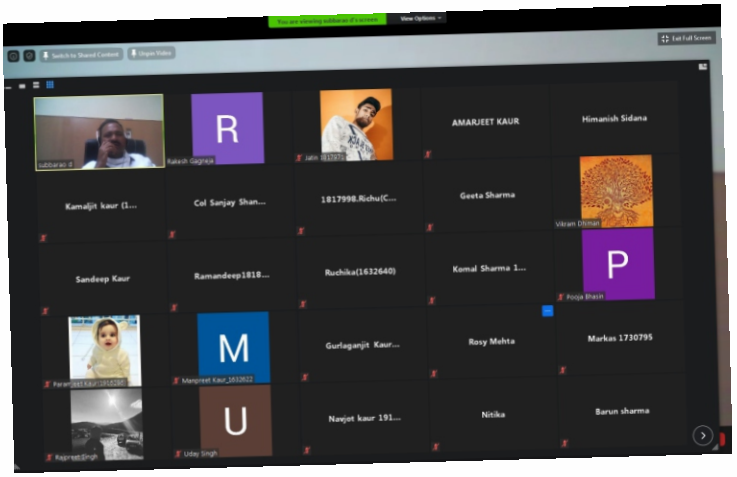




ONLINE EXPERT TALK ON

Data Science for Dynamic Driven Application System in Internet of Things IOT.

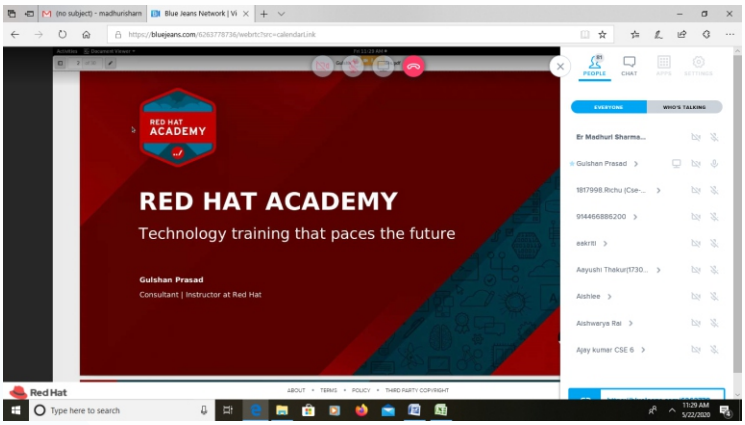
Department of Computer Science and Engineering, Lyallpur Khalsa College of Engineering, Jalandhar organized expert talk on "**Data Science for Dynamic Driven Application System in Internet of Things (IOT)**", on 19.05.2020, for students of computer science and engineering department. The speaker of the day was Dr. D.S. Rao, Director LKCE Jalandhar. He highlighted the importance of Data Science and discussed the roles of data science for dynamic driven application system. Primary objective of expert talk was to make students aware about potential impact of large data challenges and how Big Data tools are used for real time distributed data processing .It was an interactive session and many students actively interacted with the resource person.

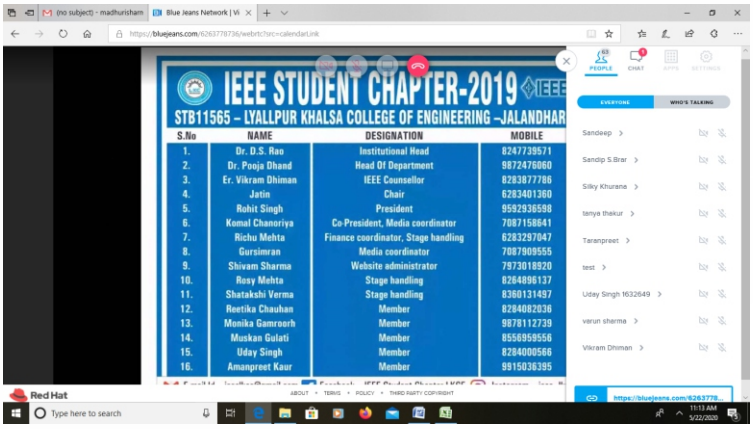


Webinar on
OPEN SOURCE TECHNOLOGIES
by Redhat

An initiative was taken by CSE and ECE deptartments by organizing Webinar on "Open Source Technologies" on 22nd May, 2020, in which more than 80 students participated. The resource person of the event was Mr. Gulshan Prashad, Technical Consultant, Red Hat Certified Instructor from Red Hat. He provided full support and cooperation to engage the students during lockdown. Open-source software development offers the potential for a more flexible technology and quicker innovation. It brings in diverse perspectives beyond those of a single company. Mr. Gulshan motivated the students to focus on attaining certification in it so that more options for better employability knock their door.

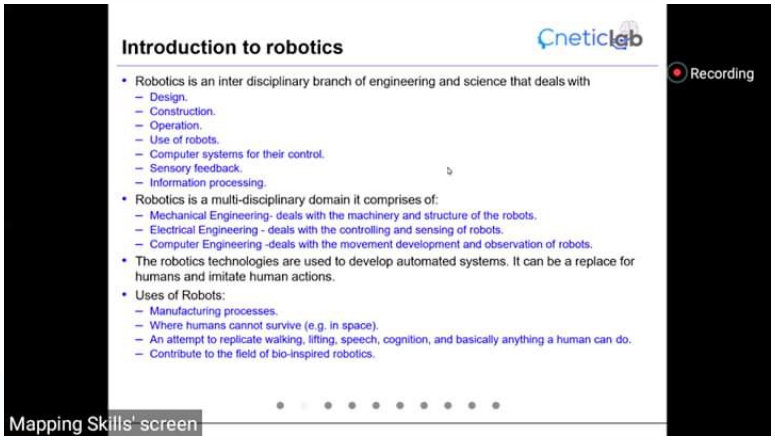
S. Sukhbir Singh Chatha (Director Academic Affairs) encouraged the students for participation in such webinars and appreciated Computer Science Engineering Department for organizing such events. Dr. R.S. Deol (Dy. Director,(AA) KCL Group) highlighted the importance of such type of webinars and said it is a great way for teachers and students to learn about a particular subject. Dr. D.S. Rao (Director, LKCE) also motivated the students and congratulated faculty members in successful completion of event.

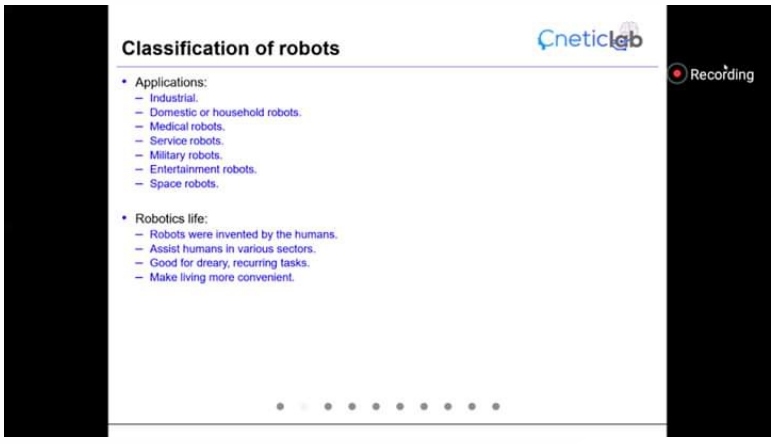




A Webinar on
"Robotics using Artificial Intelligence"

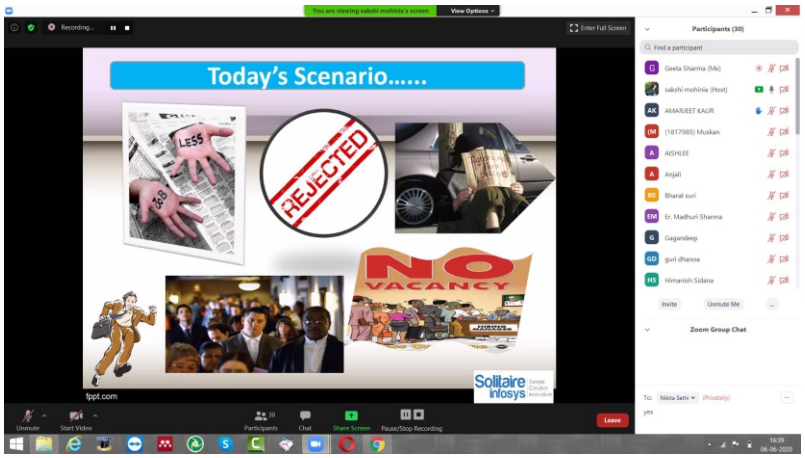
The department of CSE and ECE in collaboration with the Training and Placement Cell organized a Webinar on "Robotics using Artificial Intelligence" for the students on 28th May,2020. Mr. Apoorva, from Mapping Skills made the students aware about the use of Robotic technology in making automated systems. The students gained an insight into the design and development of robotic components and how to capture real time information with sensors and robotic systems. Robotics has applications in different fields like medical, military, space and entertainment etc. This webinar helped the students to enhance their technical and practical skills where they gained knowledge about use of artificial intelligence in robotics. Director Academic Affairs, S. Sukhbir Singh Chatha,Dy. Director Academic Affairs, Dr.R.S.Deol and Director(LKCE) Dr. D. S. Rao appreciated the synergy and enthusiasm of the students as well as the effort of departments for organizing such events.





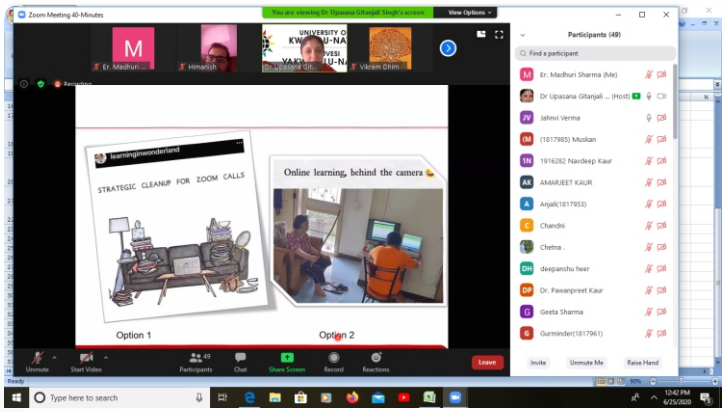
Alumni Talk series "Future Builders" on topic Career Awareness.

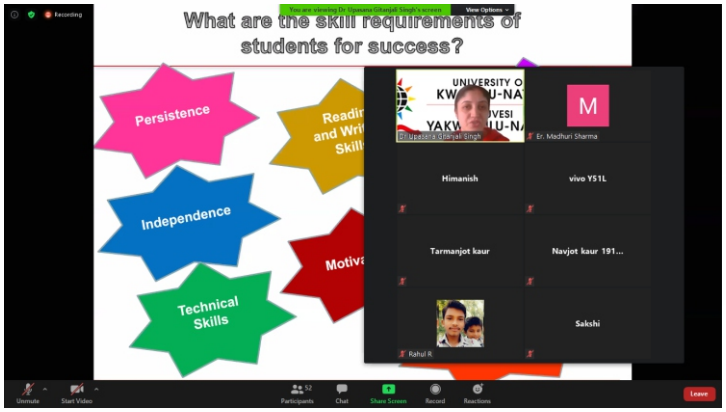
The CSE department of LKCE took the initiative to coordinate an online webinar on Future Building Career Awareness. These webinars extend and improve the student's view for career prospects and also make students aware of the future technological changes required due to the impact of the Covid19 pandemic. The webinar on topic "Career awareness" was conducted on 6th June, 2020, by our two prominent alumni, Ms. Nikita (Senior technology analyst, Oak North Globe Pvt. Ltd. Gurgaon) Ms. Sakshi (Trainer and developer, Solitaire Infosys, Mohali). They encouraged the students for both in-campus and out-campus placement drives. They further motivated students to undergo with the basic concepts and logics of programming language. In this webinar more than 80 students participated



International Webinar on
"CAREER STRIKE"

The department of Computer Science and Engineering of Lyallpur Khalsa College of Engineering organized an international webinar on "Career Strike" on 25th June, 2020. The lecture was delivered by Dr. Upasana Singh, Senior Lecturer, Discipline of Information Systems and Technology University of Kwazulu Natal, Durban South Africa. Dr. Upasana guided and motivated students to work hard on their field that they have selected. She informed students about several career opportunities which are open for techsavvy students such as freelancers, developers, entrepreneurs and many more. She inspired the students that they should excel in their field with consistent hard work and practical implementation of the concepts. S. Sukhbir Singh Chattha (Director Academic Affairs) encouraged the students for participation in such workshops and appreciated Computer Science Engineering Department for organizing such events. Dr. R.S. Deol (Dy. Director, (AA) KCL Group) highlighted the importance of such type of workshops and said it is a great way for teachers and students to learn about a particular subject. Dr. D.S. Rao (Director, LKCE) also motivated the students and congratulated faculty members in successful completion of event.





Submitted By:
MUSKAN GULATI

BlockChain: Security & Use Cases

BlockChain : You have a block, then another block, and another block. And those blocks contain information. It could be any information and as many blocks as needed: Each one chronologically connecting the blocks behind and in front. And when new information is added, (any information), a new block is added. If previous information or data is amended to change, a new block is added. The information in those blocks is secure because the BlockChain is a digital ledger system stored across a variety of networks: A system that can be programmed to record and track anything and value; from Medical records to food chain supply transactions.

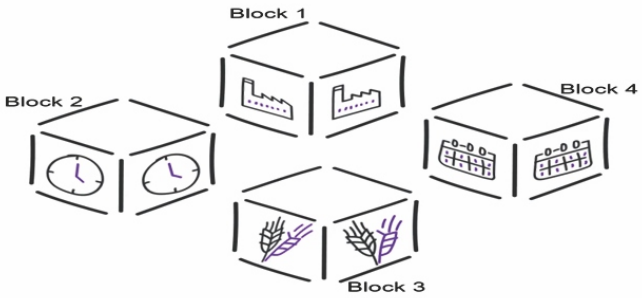


Fig 1: Blocks containing our data

Fig 2: Chronological relation between blocks

Most people think cryptocurrency like Bitcoin is the same as BlockChain, but BlockChain is not BitCoin. BlockChain is underlined technology that enables Bitcoin, like how an Engine can power a tractor.

Who has access to our data stored in a BlockChain: The identity of any individual in the network is known but it makes sure to take care of what data is being seen by whom. With BlockChain technology, we head towards a new reality: A transaction with Trust, Accountability, and Transparency at its core.

A traceable Supply Chain: Imagine we can trace when and where the food was being picked, shifted, and eventually processed. Access the

insights from the data can help the growers, retailers, suppliers, and consumers. Here comes a question: "Who has access to my data?". The answer to this is: The user decides who would have the access to his/her data and to what level of detail. That means, your data is owned by YOU. Only you can set permissions and govern who uses your data and to what level of detail.

Use cases of Block Chain: It's the age of BlockChain and businesses are discovering dozens of methods to use this technology to streamline manners, improve protection, and encourage

modification. There are dozens of use cases for BlockChain, numerous of which have the potential to influence millions around the world. The five most important use cases of BlockChain are:

- Cyber Security
- Data Management
- Insurance
- P2P Transactions
- Digital Identity

Security with BlockChain: Blockchain technology is remodeling the approach we do market by enabling users to cut out the broker in various important services, diminishing costs, and increasing efficiency. In this way, it has the potential to subdue poverty completely in the developing world. But is it secure? More particularly, can BlockChain-based technologies concurrently offer trust and privacy to assure private and tamper-free records? This issue should affect those progress institutions, businesses, and management searching blockchain for more efficient transfer of aid, money payments, smart agreements, health settings, and more. Furthermore, social administrators must ask the same enigma as they proceed with the potential for cheaper worldwide payments, clearer estate rights, and a more general introduction to finance.

Two major Australian banks have fortunately managed to use blockchain for bank guarantees correlating to industrial property leasing of a shopping center operator. The digitized guarantee built a single knowledge source with more economical fraud potential and greater efficiency.Blockchain's "immutable" and encrypted data blocks can also help to fight cybercrime, as a hacker's efforts to trade data will be decreased immediately. As applications of blockchain for cybersecurity develop, companies and governments are signing up.

Meantime, several Indian states are investigating blockchain-based systems to advance information performance and enhance cybersecurity. In 2017, Andhra Pradesh confirmed Swiss cybersecurity company WISeKey International to ensure citizens' data stored in databases remains secure with blockchain.

It's important to be conscious of this fact when deciding whether the technology you have picked will have the protection you want. Today, there are a couple of main kinds of blockchain, public and private, with plenty of variations. Public and private BlockChains vary in a couple of fundamental ways that can influence the level of protection they afford. The most visible distinction is that public BlockChains use machines connected to the public internet to approve purchases and bundle them inside blocks to add to the entries. Any machine combined with the internet can unite the company. Private blockchains, on the opposite deal, typically simply authorize known businesses to register. Together, they form a private, members-only "company chain." This variation has meaningful connections in phases of anywhere the (probably private) knowledge going within the chain is stored and who has access to it. Just from that, you can feasibly see how a public blockchain might not be appropriate for the enterprise. Another important and relevant exception is that public block chains are typically composed around the origin of anonymity, whereas private block chains use connections to confirm the association and access privileges, and so the members in the chain know exactly whom all are dealing with.

Submitted By:
Gurpinder Kaur

DATA SCIENCE & ENGINEERING

Applications & Current Scenario

Data Science and engineering is a vast topic to discuss. Let me take this opportunity to share some facts on this topic **"Data Science and Engineering".** Engineering on data is the part of data science that focuses on the applications of data collection. Data Science is the field of study of different knowledge like domain, programming skills, Mathematics, and logical reasoning skills to extract valuable information from data. Now Data science is an interesting factor for businesses worldwide. The size of big data is very vast that it is just interwoven itself in core aspects of individual ones and business professional life. There are various numbers of organizations which use data science, For instance Banking sector, manufacturing, transport, e- commerce, education, etc. All the industries are influenced by the data science, as there is no such organization left which is not using this technology.

Nowadays customers are getting worried with mindful thoughts of their data privacy rights and data habits, while organization comes into functioning to utilized intel to an incredible impact. The

application of analytics and utilize machine learning tools to derive the value in information is called data science. To make it more exciting better computing assets are forming to improved machine learning algorithms with three interlaced patterns of growing amounts of data. It's more important to concentrate on the researcher aspect of data scientist, which may accept that some data scientists must have the option to detail a question or theory from observed information than they arrive on the conclusion to offer their outcomes.

APPLICATIONS:

1. **Banking:** It is of the biggest applications of Data Science. With the help of these banks can manage their data efficiently as it has private data of their customers. Apart from this it also establishes the privacy for the data through fraud detection, smarter decisions, management of data, risk factors, real-time predictive, customer segmentation can be done. It also assesses the customer life-time value while monitoring the number of customers they have. Banks allow the companies to detect the frauds that include credit cards, insurance, and accounting if the fraud is proved. Furthermore, banks provide suggestions to their customers on investment patterns and offers.

Adding more, to assessing overall performance, banks have the ability to risk modeling through data science. With the help of this technology, banks are tailor personalized their marketing according to their need of clients. For predictive analytics, banks use machine

learning algorisms to improve their analytics' strategy. As banks use real-time and predictive analytics to understand the problem that impedes their performance.

2. **Image Recognition and Speech Recognition:** It is one most interesting applications of Data Science. With the help of different algorithms, images and speech can be recognized. For instance, there is a common feature initialized in our phones is virtual voice assistants like Google Assistant, Alexa, or Siri? Well, the reason behind the working of these successful part is working speech reorganization algorithm. The logic behind is to understand the words of general language then evaluating these words by returning the productive outcomes.

Now let's talk about image recognition. As everyone can handle social media which is the biggest use with the intelligence of Data Science. For examples, Social media platform like Instagram, Facebook, Twitter, etc. they all used Data science. These app offers to recognize the person in your list and offer to tag them when you upload a picture with them on your profile.

3. **Healthcare:** Healthcare industries are take an advantage of data science to get valuable insights. It is used data science in medical image analysis as X-rays, MRIs, CT-Scan, etc. Previously, doctors and medical examiner would have to manually search the faults in x- rays, However, data science help to reduce this factor by computing technologies and surge in data. Now it is easy that can automatically detect the flaws in imagery. Data researchers have created powerful tools for image reorganization that allow getting an in-depth understanding of complex medical imagery.

Another important factor in the use of data science in drug discovery, in this new candidate medicines is formulated. Because Drug Discovery is a complex process, it helps to simplify the process and provide early insight into the success rate of the newly discovered drug. Data science also help to analyze the combinations of drug and their effect on different gene structure to predict the outcomes.

4. **Gaming:** It is one of the best usages of data science as nowadays apart from younger youth, greyish people are too indulging with gaming. So the machine and data science algorithms are used for gaming. For this data science algorithms are designed and developed in such a way that it analyzes the previous performance of the gamer and reshapes the game accordingly. Different gaming industries like top-notch gaming studios like Zynga, EA Sports have upgraded to a new experience altogether with the help of such algorithms.

Current Scenarios: As discussed above, it is already a hot discussion that big data is ready to play an important job in the future. We lived in a world of huge and big data. So basically transactions would be across all the fields at a fast rate. Data science would eventually help to solve real-life problems and interpreted important decisions. So it's surely said that the best jobs and highly paid job will the data scientist, Data Engineer, and Business Analyst.

The painstaking research have done from where they revealed that in the year 2019, 2.9 million jobs requesting for the analytical skills, Data scientist. Adding more, IBM predicted that by the upcoming year's Data science would play an important role.

Data Science and Analytics job listings are projected to grow from nearly 364,000 listings to approximately 2,720,000 Furthermore, Data Science established large numbers of jobs in all major government and private sectors across the globe. This indicates that new skills are expected to get the job. As these found in Data Analytics, Machine learning, Artificial intelligence. So these jobs opportunity will grow more in demand by the upcoming years. It demands a hike of 28%. Meanwhile, within the next few years, there would be applications of data science in almost each and every organization. Apart from this technology is to keep improving and get full control over the world, which requires the lessee's human intervention.

Thank you.

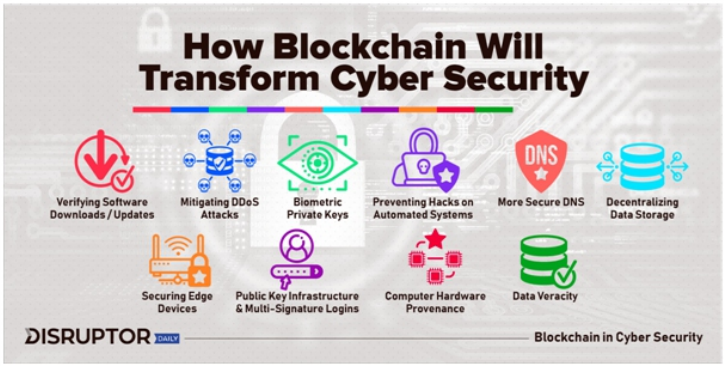
Submitted By:
Lovish Joshi

Blockchain: Security and Use of Cases

Abstract: Blockchain has attracted the attention of next-generation financial technologies because of its security in the information age. In particular, it provides security with peer-to-peer authentication, encryption, and hash value creation. Cloud computing has been widely accepted in all IT fields for its efficiency and availability. In this paper, we discuss the concept of blockchain technology and security. According to the global financial sector, the technology protection market is expected to grow to about USD 20 billion by 2020. In addition to this the blockchain technology can be used over the Internet of Things (IoT) and its applications are expected to upsurge. In addition to this, we will learn how we can use it to integrate blockchain security into the cloud computing.

Introduction: Given the need for the next generation of financial technologies, there have been effective lessons in the blockchain on the safe use of electronic money only through peer-to-peer communication without the involvement of third parties. The blockchain is a public ledger of transactions and prevents burglary during transactions involving cash. As a type of distributed database and a growing database of data records, it is designed to disable unreasonable interference by a distributed peer-to-peer provider. The transaction records are encrypted according to the law and are processed on computers using blockchain software. Bitcoin is an electronic currency that uses blockchain technology. Use blockchain can provide higher security compared to storing all data in a central database. In data storage and data management, damage to database attacks can be prevented.

In addition, since the blockchain has an openness feature, it can provide transparency in the data when used in an area that requires data disclosure. Due to such potential, it can be used in a variety of areas including the financial sector and the Internet of Things (IoT) environment and its use is expected to be expanded. The blockchain completes a transaction record with a process authentication process, in which an electronic borrower makes a block by consolidating a network transaction. The hash value is then done by verifying and connecting the previous block. This block is periodically updated and displayed in electronic cash transaction details to share the latest transaction details. This process provides security for electronic money transactions and allows for the use of a reliable method. Cloud computing has been used in many IT fields because of its functionality and availability. In this Article, we seek to investigate the meaning and technology of the blockchain framework and to examine the trends of studies to date to discuss areas to be studied, taking into account computer locations.



Blockchain Security :

Blockchain technology has been used or seen as cyber money and is actually used. Note, however, that various security issues that occur in the blockchain agreement, transactions, wallets and software have been reported.

1.Blockchain Settlement: Although there should be only one blockchain because the successive connections of manufactured blocks, the blockchain can be split in two because the last two blocks can be temporarily built if two different peers succeed in digging a block generating response simultaneously. In that case, a block that is not selected as the latest block by most of its peers in the bitcoin network and then continues mining will no longer mean anything.

2. Transaction Security: Since the script used for inputs and outputs is a flexible programming language, different transaction forms can be created using that. A bitcoin contract is a way to use bitcoin in existing validation and financial service. The most widely used method involves creating a contract using a script that incorporates a multi-signature process called multi-sig.

3. Wallet security: A bitcoin address is a hash key of a public key marked with public and personal keys. Therefore, the lock script

for bitcoin transaction and address as an issuer can be opened with an opening text with a value signed with public address key and personal key. The bitcoin wallet stores information such as the personal key of the address that will be used for the creation of the unlock script. It means that the loss of information in the wallet leads to the loss of bitcoin because the details are important in using bitcoin.

Blockchain Security Case Studies: The need for blockchain-based bitcoins has increased since hacking cases were reported. Mountain. Gox, a bitcoin exchange based in Tokyo, Japan, reported a loss of USD 8.75 million due to hacking in June 2011 and bitcoin wallet service InstaWallet reported a loss of USD 4.6 million due to hacking in April 2013. In November of the same year, an unknown market The sheepfold was forced to close after someone stole bitcoins worth USD 100 million. Mountain. Gox, which had already lost the hack, also reported a loss of USD 470 million as a result of the hacking in February 2014 and included a collapse. These problems have raised awareness of the need for security. There have been studies on blockchain security to overcome such security issues and published many papers. In particular, since blockchain is a common cyber money technology, the damage can be devastating in cases of misuse and cyber money laundering. Therefore, it seems very reasonable to understand known cases of assault.

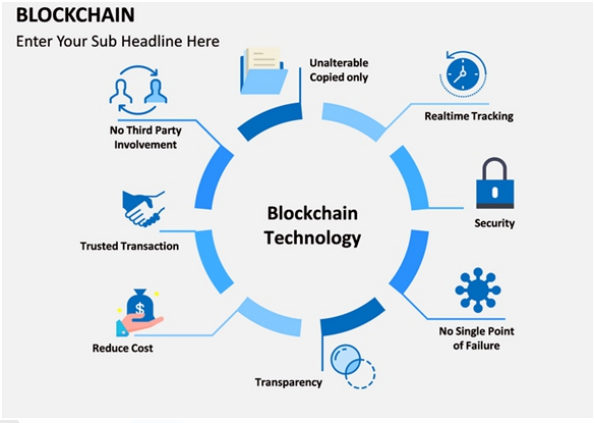
Conclusion: The blockchain has removed the server to exclude the involvement of central authorities and facilitates transactions with participants who end up sharing shared transactions and, ultimately, allowing the transactions using the P2P technology.

Submitted By:
Mamta Kumari

BLOCKCHAIN : SECURITY & USECASES

Applications & Current Scenario

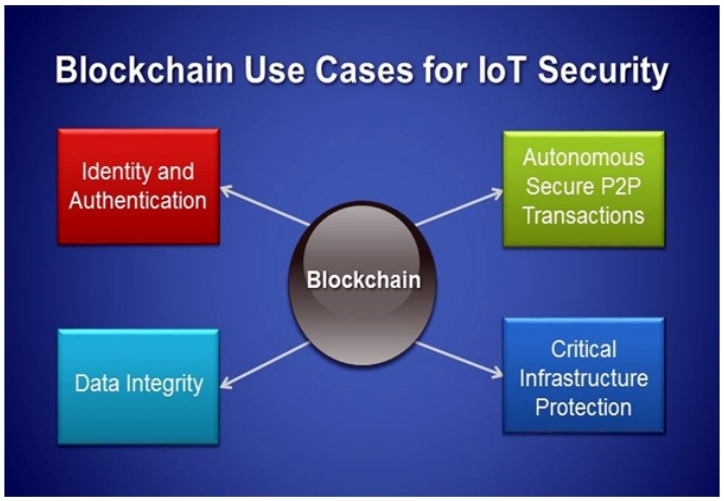
Blockchain is being used for highly transaction management and it is replacing current existing transaction management system. If a technology replacing the existing system there must be a problem so How bitcoin transaction has to be take place then it need certain medium that exactly what blockchain is.



Blockchain Features

1. Every node on the network has a copy of the digital ledger. To add a transaction every node needs to check its validity. If the majority thinks it's valid then it's added to the ledger. This promotes transparency and makes it corruption proof.
2. The network is decentralised meaing it doesn't have any governing authority after the framework instead a group of nodes maintain the network making it decentralised.
3. As it eliminates the need for central authority no one can just simply change any characteristics of the network for their beneficial using encryption ensures another layer of security for the system.
4. Blockchain offers a faster settlement compared to older banking system. This way a user can transfer money relatively faster which saves a lot of time in the long run.

USECASES FOR BLOCKCHAIN IN SECURITY:-



1. Secure Private messaging - Various companies are using blockchain to secure private information exchanged in chats, messaging apps and through social media .The end to end encryption employed by the likes of whatsapp and messenger uses blockchain to secure user's metadata. The user will not have to use email or ant other authentication method to use the messenger.The metadata means the information about the data (data of data) and this is distributed throughout the ledger and will not be available for gathering in one single point from it could be compromised.
2. Boosting or even replacing PKI - PKI means Public Key infrastructure is the public key cryptography that is used for securing emails, messaging apllication website and other also. Almost major of the implementation depends on a centralised third part certificate authority(CA) to issue ,revokeand store key pairs,which is targeted by criminals to compromise encrypted communications and spoof identities. Certcoin is one of the first implementation of blockchain by PKI.
3. A Safer DNS – Mirai botnet showed how easy it is for criminals to compromise critical internet infrastructure.By using the domain name system (DNS).

Service providers for most of the website the attackers were able to cutoff access to twitter, netflix, paypal and other also. A blockchain approach to storing DNS entries could improve security by removing the single, attackable target.

4. Reduced DDOS attacks – Blockchain claims that its decentralised ledger system helps to protect from distributed denial of service attacks. When attacks are increasing over and above 100Gbps. The firm says its decentralised solutions can protect against such attacks by allowing you to connect to protection pools near you to provide better protection and accelerate your content.

Submitted By:
Rosy

ARTICLE ON DATA SCIENCE AND ENGINEERING : (APPLICATIONS & CURRENT SCENARIOS)

Data Science:- Data science is a branch of science which utilizes data analysis, algorithms, visualization and data collection for getting insights about the data. It provides relevant insights by segmenting, structured and unstructured data. This employs the method of deep learning, AI, predictive analysis and machine learning. Data Science is all about analysis, visualization, preparation, extraction and maintenance of data. It uses scientific processes and methods to draw insights from data because it may be a cross-disciplinary field.

Solving Problems with Data Science:- Data Cleaning and Preprocessing is the initiative of knowledge Science to unravel any world problem. Data Scientists have given a dataset, this could also be in an unstructured format with various inconsistencies. By organizing the info and removing unwanted information, insights are often analyzed and drawn easily. During this process, redundant data is removed.

Applications of knowledge Science:-

i. Data Science in Healthcare:- Data Science plays a pivotal role within the Healthcare Industry. With the assistance of classification algorithms, doctors can detect cancer and tumors at an early stage using Image Recognition software. Using Data Science, Genetic Industries classifies and analyzes patterns of genomics sequences.

ii. Data Science in E-commerce:- Amazon has a recommendation system that recommends users various products on the idea of their historical purchase. Data Scientists have developed recommendation systems to predict user preferences using Machine Learning.

iii. Data Science in Manufacturing:- Industrial robots have appropriated repetitive roles required within the manufacturing unit. These industrial robots use Data Science technologies and are autonomous in nature like Reinforcement Learning and Image Recognition.

iv. Data Science as Conversational Agents:- Siri by Apple and Amazon's Alexa use Speech Recognition to know users. Speech recognition system developed by Data Scientists, that converts human speech into textual data. By using the various Machine Learning algorithms, it classifies user queries and supplies an appropriate response.

v. Data Science in Transport:- Self Driving Cars use autonomous agents that utilizes The reinforcement Learning and Detection algorithms. Self-Driving Cars aren't any more fiction because of advancements in Data Science.

Pros and Cons of Data Science:- The field of data Science is extremely large and has its justifiable share of advantages and limitations. So, here we'll measure the pros, and cons of data Science. This text will assist you to assess yourself and take the right course within the sector of data Science.

a. Advantages of Data Science:- Various benefits of data Science is as follows:

1. Demand:- Data Science is in very high demand. Prospective job seekers have numerous opportunities. It's the fastest growing job on LinkedIn and is predicted to form 11.5 million jobs by 2026. This makes Data Science a highly employable job sector.

2. A Highly Paid Career:- Data Science is one of the foremost highly paid jobs. Consistent with Glassdoor, Data Scientists make a mean of $116,100 once a year. Data Science is the great lucrative career option.

3. Data Science is flexible:- There are numerous applications of knowledge Science. It's widely utilized in health-care, banking, consultancy services, and e-commerce industries. Data Science may be a very versatile field. Therefore, you'll have the chance to figure in various fields.

4. Data Science Makes Data Better:- Companies demand expert Data Scientists to analyze and process their data. They not only process and analyze the data but also improve its quality. Therefore, Data Science deals with enriching data and making it better for his or her company.

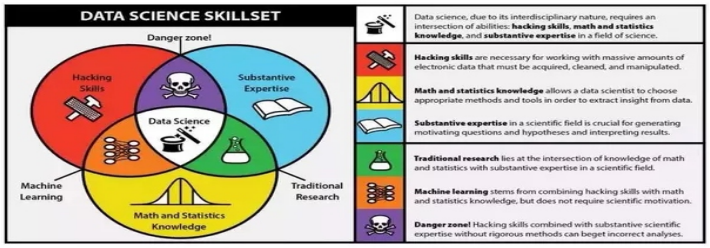
5. Data Scientists are very Prestigious:- Data Scientists allow companies to form smarter business decisions. Companies believe Data Scientists and use their expertise to provide better results to their clients. This provides Data Scientists an important position within the corporate.

Disadvantages of Data Science:- While Data Science could also be a really lucrative career option, there are also various disadvantages to this field. To understand the entire picture of data Science, we must also know the restrictions of data Science. A number of them are as follows:

1. Data Science is Blurry Term:- Data Science could also be a really general term and doesn't have a specific definition. While it's become a buzzword, it's extremely hard to write down the precise meaning of a knowledge Scientist. A knowledge Scientist's specific role depends on the world that the company is specializing in. Some people describe Data Science to be the fourth paradigm of Science, few critics have called it a mere rebranding of Statistics.

2. Mastering Data Science is nearly impossible:- Because of many fields, Data Science stems from computing, Mathematics, and Statistics. It's difficult to master each field and be equivalently expert altogether. Many online courses try to fill the skill-gap that the data science industry is facing, it's still impossible to be proficient at it considering the immensity of the sector. An individual with a background in Statistics won't be able to master computing on short notice, so on become a proficient Data Scientist.

3. A great deal of Domain Knowledge Required:- A person with a substantial background in computing and Statistics finds it is difficult to unravel Data Science problems without its background. For instance, A health-care industry that works on an analysis of genomics sequences would require an appropriate employee having some knowledge of biology and genetics. to help the corporate, this enables the info Scientists to form calculated decisions.



FACULTY ACHIEVEMENTS

- **Dr. D.S. Rao :**

1. Attended one week online Short Term Course on "Data Analytics Tools and Techniques" conducted by Department of Computer Science and Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar

- **Dr. Pooja Dhand :**

1. Attended one week FDP on "NBA Process" by Dr. B.S.Pabla, NITTTR from 11th May, 2020 to 15th May, 2020.

- **Er. Varun Sharma :**

1. Attended one week FDP on "NBA Process" by Dr. B.S. Pabla, NITTTR from 11th May,2020 to 15th May,2020.
2. Attended one week FDP on "Research and Innovation" by Sri Sai Group of Institutes, Badhani, Pathankot from5th June,2020 to 9th June,2020.
3. Attended Webinar on "Software Agents and Multi agent System" by Dr. Harjot Kaur on 25th June,2020

- **Er. Rajni Bedi :**

1. Attended one week Online FDP on"Opportunities & Challenges in Electronics & Allied Industries in India post COVID-19"from 25th May,2020 to 30th May,2020 organized by Department of Electronics Engineeringin association with Institution's Innovation Council (IIC)of Vivekanand Education Society's Institute of Technology
2. Attended one week National Level FDP on MOODLE learning management System organized by Deptt. of Electronics and telecommunication Engg., PICT, PUNE in association with spoken tutorial, IIT Mumbai
3. Attended one week FDP – IIT (Inevitable Ingenious Technologies) Webinar Series from 18th May,2020 to 23rd May,2020 organized by Sri Venkateshwaraa College of Engineering & Technology, Puducherry.

- **Er. Vikram Dhiman :**

1. Attended one week FDPon NBA Accreditation of Engineering Programs by NITTTR Chandigarh from 11th May,2020 to 15th May,2020.
2. Attended five days hands on workshop on "Patent Searching, Drafting and Filing" from 29th May,2020 to 2nd June,2020 in association with Turnip Innovations and Exilyze Intellectual Services, IEEE COMPUTER SOCIETY & COMPUTER SOCIETY OF INDIA.

- **Er. Rakesh Gagneja :**

1. Attended Online Expert Talk on Advances in Sensor Network.
2. Attended Webinar on "Career Strike" by Dr. Upasana Singh on 25th June, 2020.

- **Er. Amarjeet Kaur :**

1. Attended Online course on introduction to AI, machine Learning and data science on 1st June, 2020
2. Attended one day workshop on emerging trends in research methodologies on 9th June,2020

- **Dr. Geeta Sharma :**

1. Attended Workshop on Automation using Selenium" on 9th May,2020
2. Attended one week FDP on NBA Accreditation of Engineering Programs by NITTTR Chandigarh from 11th May,2020 to 15th May,2020.
3. Research Paper: "Enhancement in Authentication Schemes: A Review"which is under review.

- **Er. Madhuri Sharma :**

1. Attended Online FDP by KCL-IMT on "Publication in ABDC/SCI and High impact Journals: Do's and Don'ts" on 16th May,2020.
2. Attended Online workshop on "Multimedia Tools and Design Elements" organised by Hans Raj MahilaMahaVidyalya, Jalandhar on17th May, 2020
3. Attended Online international webinar on "The Talent ECO System" by Dr. Steve MC Kenna on 15th June,2020

- **Er. Bindu Goyal :**

1. Attendedone week FDP on "Data Analytics using Python", at NITTTR, Chandigarh from 18th May,2020 to 22nd May,2020.
2. Attendedone week FDP on"Outcome Based Curriculum Design", at NITTTR, Chandigarh. From 1stJune,2020 to 5th June,2020.

- **Er. Puneet Thapar :**

1. Attended five days online FDP on "Artificial intelligence" by ISTE and Brain of Vision from 22ndMay,2020 to 26th May,2020
2. AttendedIPR by Rajiv Gandhi NIIPM, Govt. of India on 19th May,2020
3. Attended three day workshop on "Web Development using Wordpress" by KCL-IMT, Jalandhar

INDUSTRY AND CORPORATE LINKAGES

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