

**Report for Five Day Online Short Term Training Programme on
ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON INDUSTRY 4.0
(Technologies and Solution Methodologies for Real-world Scenarios)**

12.05.2021

Conducted during 26th – 30th April 2021

**Organized by School of Computer, Information & Mathematical Sciences, BSACIST
in association with
Computer Society of India (CSI) and ICT Academy**

Convenor

Dr. Venkatesan Selvam, Dean / SCIMS

Coordinators

Dr. Gufran Ahmad Ansari, Prof. / CA & Director (CSC)

Dr. S. Revathi, Prof./ CSE

Dr. N. Ayyanathan, Assoc. Prof./ CA

Co-coordinators

Mr. N. Rajendran, AP (Sr. Gr.)/ IT

Dr. A. Ramachandran, AP/ CSE

Mr. V.M. Niaz Ahmed, AP/ CA

PREAMBLE

A Five Day Short Term Training Programme on “Artificial Intelligence and its Impact on Industry 4.0”, was organized by the School of Computer, Information and Mathematical Sciences, B.S. Abdur Rahman Crescent institute of Science and Technology from 26-4-2021 to 30-4-2021 through Zoom platform. The inaugural function of the programme was attended by participants from various institutions and organizations along with faculty members and Heads of the various departments of this prestigious institution of repute with 37 years of academic excellence.

1. Course Content and Online Delivery Mode of the STTP.

Day 1 - FN:

Session Topic: Inauguration & Keynote address on “Artificial Intelligence for Reliability Analysis of Safety-Critical Systems”

Date and Timing: 26.4.2021, 10.00 am to 11.00 am

Chief Guest: Dr. Lalit Kumar Singh, Nuclear Scientist, NPCIL (BARC), Department of Atomic Energy, Govt. of India

Session Coordinators: Dr. A.K. Reshmy, AP/ CA, Dr. Shakila Anjum, AP/ CA

Dr. Lalith explained the Markov models on reliability of systems and Petri Nets, and discussed about the reliability prediction of safety critical systems. He also explained about the Safety-critical systems, which are becoming more powerful and more integrated to enable higher-level functionality. Modern multi-core are often the computing backbone in such systems for which safety and associated certification tasks are one of the key challenges, which can become more costly and difficult to achieve. After the introduction to reliability, Petri Nets and Modelling of systems and Properties of Petri Nets were discussed in detail.

The screenshot shows a Zoom meeting interface. The main content is a slide titled "RELIABILITY PREDICTION OF SAFETY CRITICAL SYSTEMS". The slide contains a vertical flowchart with six steps, each in a colored box with a downward arrow pointing to the next step:

1. Introduction to Reliability & Background
2. Petri Nets and Modelling of Systems
3. Properties of Petri Nets
4. Analysis Techniques
5. Reliability Prediction Framework
6. Conclusion

At the bottom of the slide, there is a "Leave" button. The Zoom meeting controls at the bottom of the screen include: Unmute, Start Video, Participants (50), Chat, Share Screen, Record, Reactions, and Leave. On the right side, there is a "Participants (50)" list with a search bar and icons for each participant's status (mute, video, chat).

RELIABILITY PREDICTION OF SCS (RELIABILITY)

Let X be a random variable representing the time to failure of a component. The reliability of the component at time t is given by: $R_x(t) = P[X > t] = 1 - P[X \leq t] = 1 - F_x(t)$

Similarly, we can define unreliability at time t by:

$$U_x(t) = P[X \leq t] = F_x(t)$$

RELIABILITY PREDICTION OF SAFETY CRITICAL SYSTEMS

Petri nets Firing Example

$2H_2 + O_2 \rightarrow 2H_2O$

The diagram shows a Petri net with three places: H_2 (containing 2 tokens), O_2 (containing 1 token), and H_2O (empty). A transition t is connected to these places. The transition t has an outgoing edge to the H_2O place with a weight of 2.

Day 1 - FN:

Session Topic: Introduction to Industry 4.0 & AI and Industry 4.0 Applications in Image Processing

Date and Timing: 26.4.2021, 11.15 am to 12.45 pm

Chief Guest: Dr. Mohanraj Vengadachalam, Data Scientist, Standard Chartered, Chennai

Session Coordinators: Dr. K.A. Varun Kumar, AP/ IT and Mr. A. Salman Ayaz, AP/ CA

Dr. Varun Kumar introduced the Resource Person of the session. Dr. Mohanraj has rich experience in the field of Data Science and Deep learning.

Dr. Mohanraj Vengadachalam, Data Scientist, Standard Chartered, Chennai handled the second session, on the topic “Introduction to Industry 4.0 and AI and Industry 4.0 Applications in

Image Processing”. He gave a brief introduction about Computer Vision with several real time applications of Computer Vision, which was followed by demonstration of executing the code with clear explanation of the concepts to the audience. He gave examples about Safety Detection, Quality Check, Face mask detection, Pothole detection and Facial feature detection. The session was very informative and several participants interacted with the chief guest by asking questions. Finally, the session got concluded at 12.45 pm and Dr. Varun Kumar thanked the Resource Person and the participants.

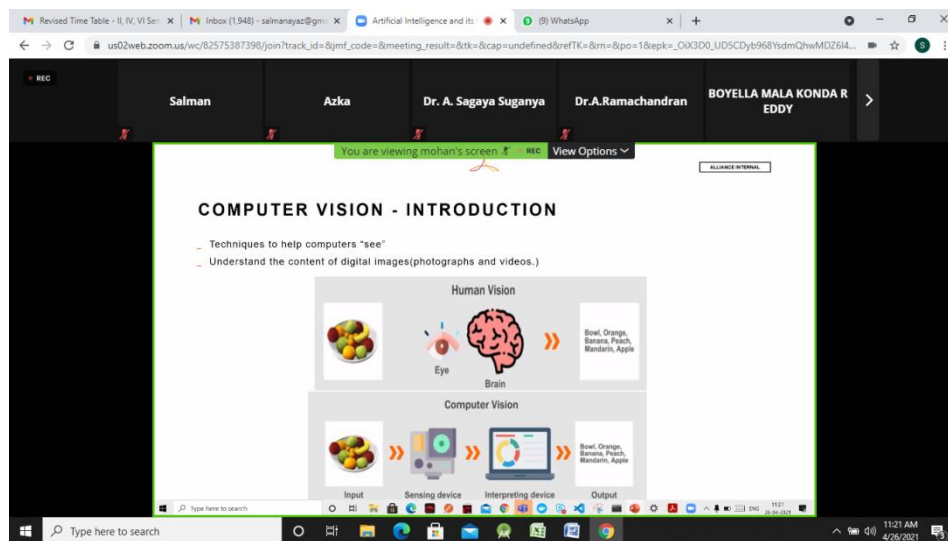


Fig: Introduction to Computer Vision

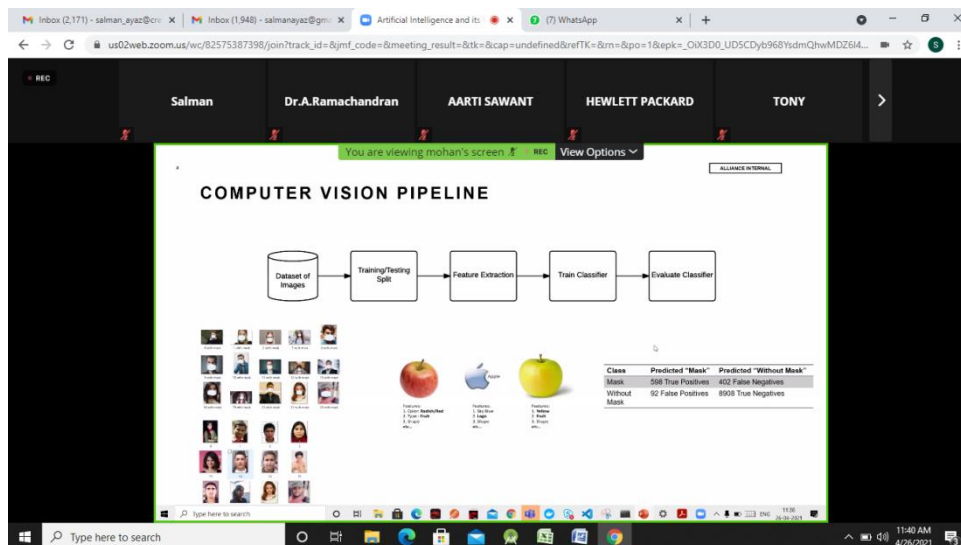


Fig: Pipeline of Computer Vision

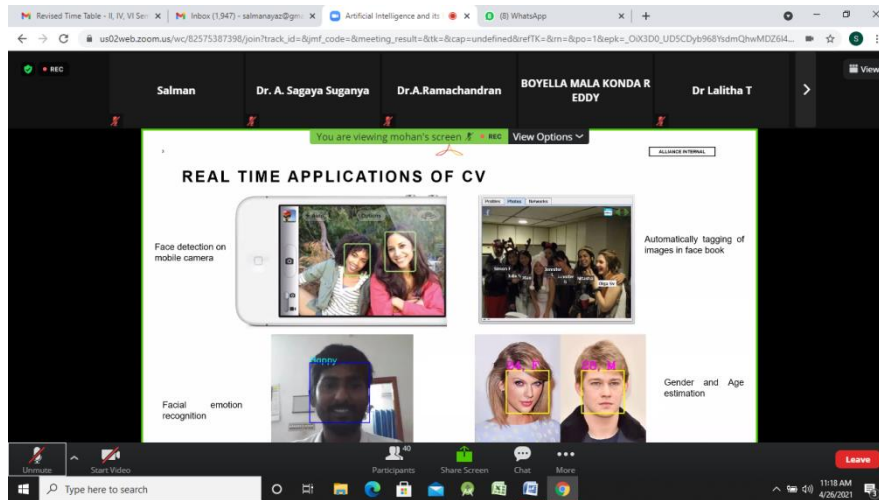


Fig: Real Time Applications of Computer Vision

DAY 1 - AN:

Session Topic: Role of Industry 4.0 in Digital Marketing

Date and Timing: 26.4.2021 and 2.00 pm to 4.00 pm

Chief Guest: Mr. V.J. Saravanan, Digital Marketing Strategist, Founder - Managing Director, Foursteps Training Solutions

Session Coordinators: Dr. K.A. Varun Kumar, AP/ IT Mr. A. Salman Ayaz, AP/ CA

The impact of recent technology in Digital Marketing in the living environment was discussed in this session. The speaker presented some basic concepts used in the technology relating to best suitable real-life examples which are essential for the understanding of the technology.

Further the session was detailed about:

- Marketing through the Internet with zero percent investment
- Hands on WordPress
- How YouTube channel owner could earn money?
- How SocialBlade.com can be used?
- Digital course platform

The entire session was an interactive session and the speaker answered many queries raised by the participants. Also, the feedback about the session was collected from all the participants to improve the sessions that will be conducted in the future.

Mr. V. Balaji, AP/ CSE concluded the session with Vote of thanks. The virtual webinar was an eye opener for the participants who wanted to bloom in the field of Digital Marketing.

Screenshots of the Online STTP : Session II

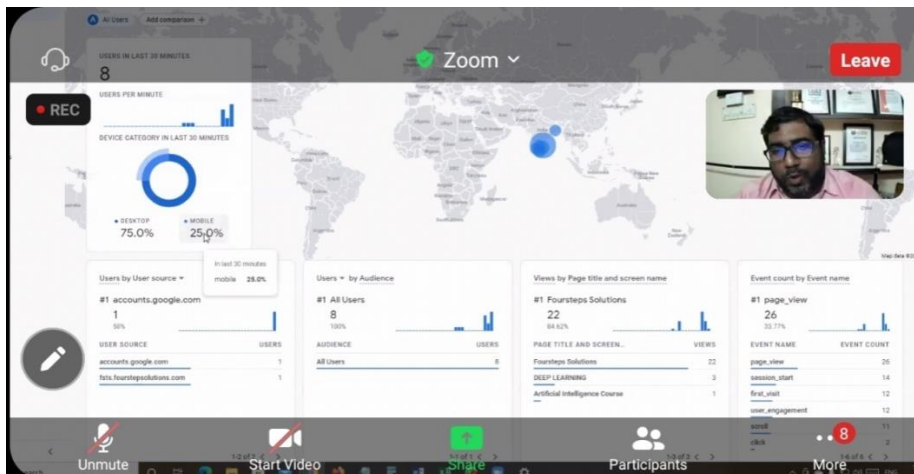
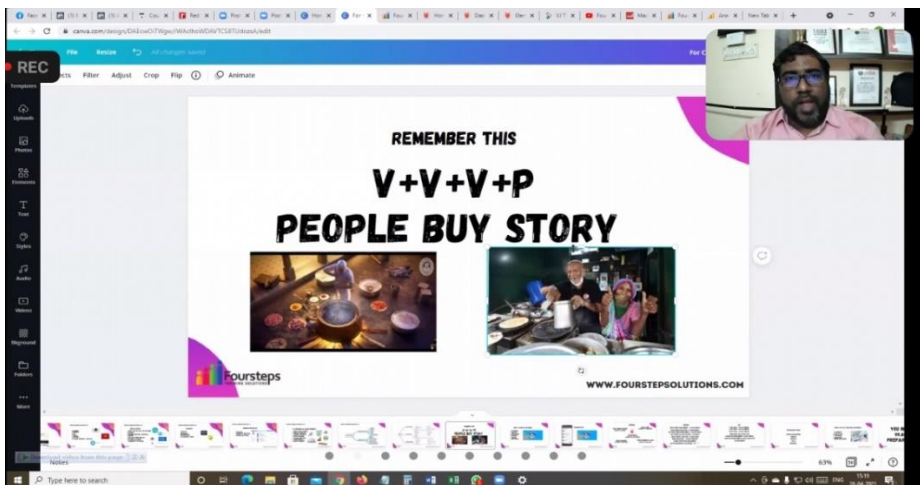
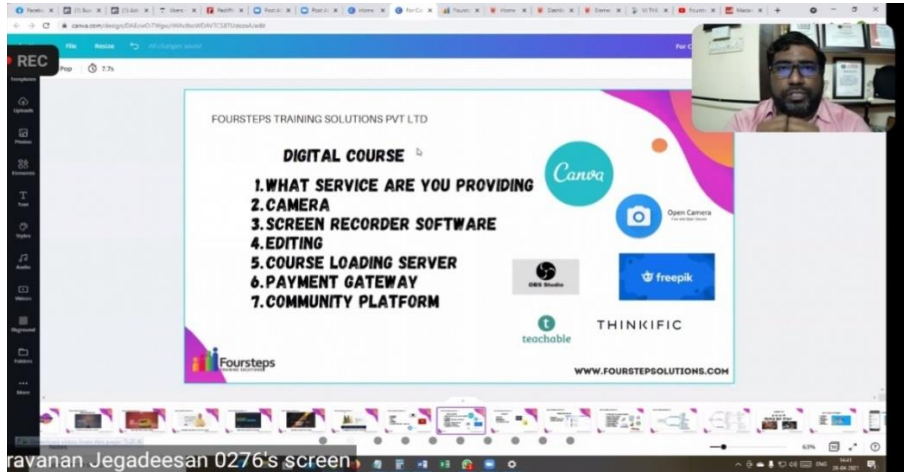


Fig: Mr.V.J. Saravanan interacting with the participants

The objective of the sessions was achieved. The overall session discussion benefitted the faculties and research scholars. This webinar enlightened our participants with Industry 4.0 in digital marketing.

DAY 2 FN:

Session Topic: IoT Powered Energy Analytics

Date and Timing: 27.4.2021 and 10.30 am to 12.30 pm

Chief Guest: Dr. M.P. Selvan, Professor, NIT, Trichy

Session Coordinators: Dr. N. Ayyanathan, Assoc. Prof./ CA Dr. S. Srisakthi, AP/ CA

The second day of the STTP program on “Artificial Intelligence and its Impact on Industry 4.0”, started with a session on “IoT Powered Energy Analytics” at 10.30. The session was handled by Dr. M.P. Selvan, Professor NIT Trichy. Dr. S. Srisakthi, Assistant Professor of the CA department introduced the speaker of the session. The session started with the Intrusion of Communication Technology in Power Sector.

The speaker explained about the basic technology behind the power line communication. He also compared the communication that happened in the old times with the scenario of process that is happening now. The speaker explained about the process used in the electricity board of how the power usage is measured.

The use of IoT and the mechanism behind it was also discussed in the session. The key IoT considerations like coverage/communication range, low cost, low energy, scalability of number of nodes etc were discussed.

The mechanism behind the IoT enabling wireless technologies were explained. A detailed discussion on small applications of energy sectors were carried out. Dr. M.P. Selvan also talked about a real time project that he has been involved in NIT Trichy.

The speaker talked about the HEMS – Home Energy Management System and explained of how each individual house can be installed with a smart energy meter. In future he suggested that the unused power energy of one house can be given to the neighbour house. In this way the power becomes a commodity. The speaker also mentioned about the prediction that Professor Schweppe made with respect to the power energy usage.

The speaker gave some interesting facts about some of the government projects that is happening in India.

The use of AI in the power energy domain would help the conservation and proper use of power was stressed. The session ended at 12.30 with the question-and-answer section. The queries of the audience were clarified by the speaker. Dr.Shakila Anjum, Assistant Professor of the CA department proposed the vote of thanks.

INTRUSION OF COMMUNICATION TECHNOLOGY IN POWER SECTOR

PAST **PRESENT** **FUTURE**

— Electrical infrastructure - - - Communications

IoT Enabling Wireless Technologies

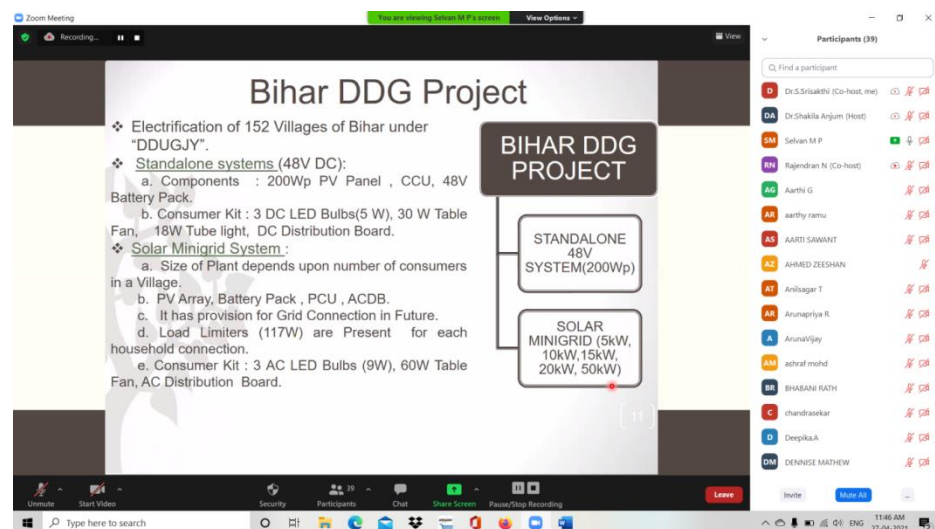
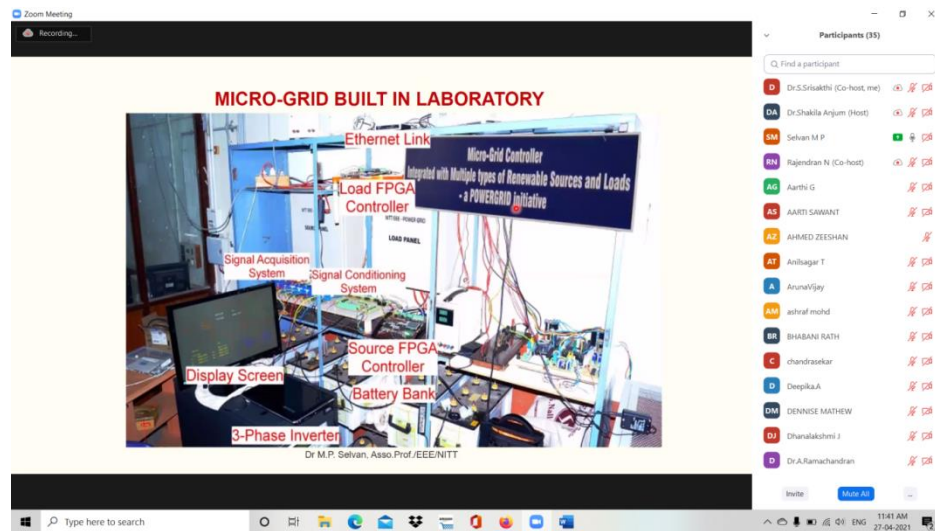
Strong conformance regimes

- NFC
- EMV
- 3GPP LTE, LTE-MTC
- 3GPP GSM, WCDMA, EC-GPRS
- 3GPP2 CDMA2000
- WiMAX
- 3GPP NB-IoT

Interop based conformance

- Bluetooth
- ANT+
- MiWi
- ZigBee
- Z-Wave
- Thread (LoWPAN)
- EnOcean
- Many others
- ISA 100.11a (LoWPAN)
- WirelessHART
- Many others
- 802.11a/b/g/n/ac
- 802.11ah (1km)
- 802.11p (V2X)
- 802.11af (white space)
- Wi-SUN (LoWPAN)
- ZigBee NAN (LoWPAN)
- Wireless M-bus
- Many others
- LoRa
- Telera
- OnRam
- Positive Train Control
- Many others

Source: KEYSIGHT Technologies



DAY 2 AN:

Session Topic: IoT for Computational Intelligence

Date and Timing: 27.4.2021 2.00 pm to 4.00 pm

Chief Guest: Ms. R. Ramakala, IoT Trainer, Skill Technica

Session Coordinators: Dr.P.Gnanasekaran, AP/ IT and Ms. A.Sonya AP/ IT

The second session was handled by Ms. R. Ramakala, IoT Trainer, Skill Technica, on the topic "IoT for computational Intelligence". Dr. P. Gnanasekaran, AP/IT, introduced the resource person of the session.

Ms. R. Ramakala is having rich experience in the field of IoT, AI and Machine Learning. She gave a brief introduction about IoT, AI and ML and explained several real time applications of Artificial Intelligence and Machine Learning.

Ms. R. Ramakala gave several real time examples and she showed the demonstration by executing the code and explained the concepts to the participants. Several participants eagerly attended the event and interacted with the resource person and cleared their queries. They were enthusiastic about the session. Finally the session got concluded at 04.00 pm and Ms. A. Sonya, AP/IT thanked the resource person and the participants.

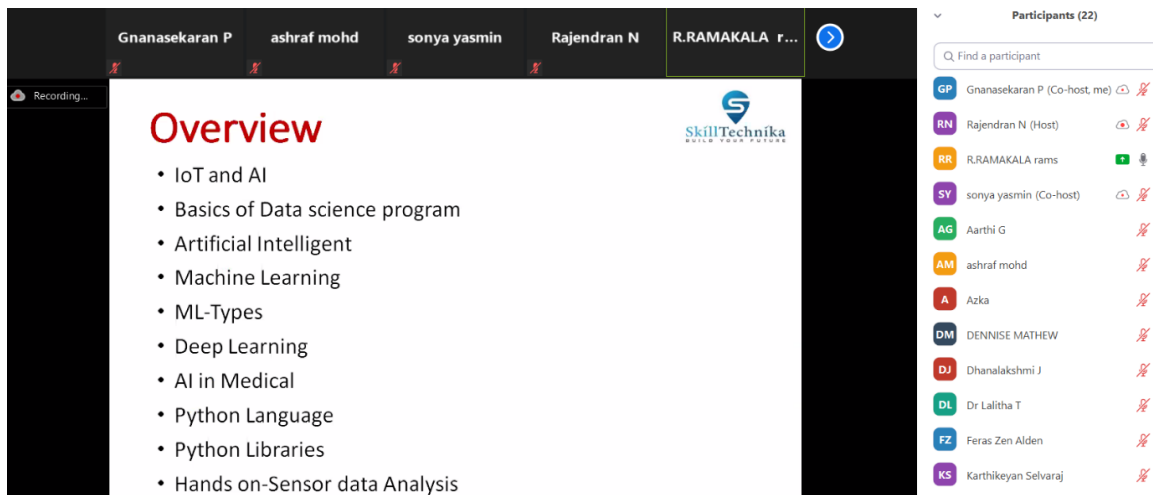
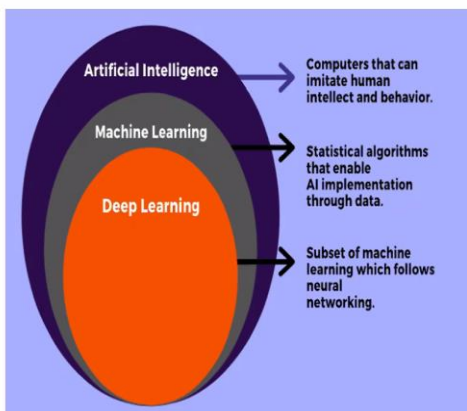


Fig: Agenda of the Session

AI-Artificial intelligence



What is Machine Learning



- Machine Learning is said as a subset of **artificial intelligence** that is mainly concerned with the development of algorithms which allow a computer to learn from the data and past experiences on their own.

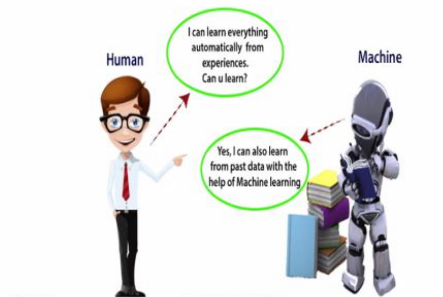
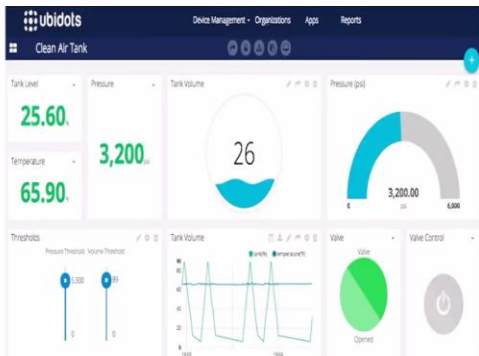


Fig: Introduction to Artificial Intelligence (AI) and Machine Learning (ML)



- Ubidots point-and-click application development tools, create real-time dashboards to analyze data and control devices.



```

void loop()
{
    // Make sure to call update as fast as possible
    pox.update();
    if (millis() - tsLastReport > REPORTING_PERIOD_MS)
    {
        Serial.print("BPM: ");
        Serial.print(pox.getHeartRate());
        Serial.print(" SpO2: ");
        Serial.print(pox.getSpO2());
        Serial.print("%");
        Serial.println("\n");
        ubidots.add("BPM", pox.getHeartRate());
        ubidots.add("SpO2", pox.getSpO2());

        temperature = (temperature * resolution);
        temperature = temperature * 100 + 3;
        Serial.print("Temperature=");
        Serial.print(temperature);
        Serial.print(" *C");
        Serial.println();
        if (temperature > 39.00)
        {
            sendSMS(temperature);
        }
        ubidots.add("Temp", temperature);
        tsLastReport = millis();
        ubidots.send();
    }
}
    
```



DAY 3 FN:

Session Topic: Advanced Machine Learning Techniques - Data Science, Data Analytics, AI & Python Basics

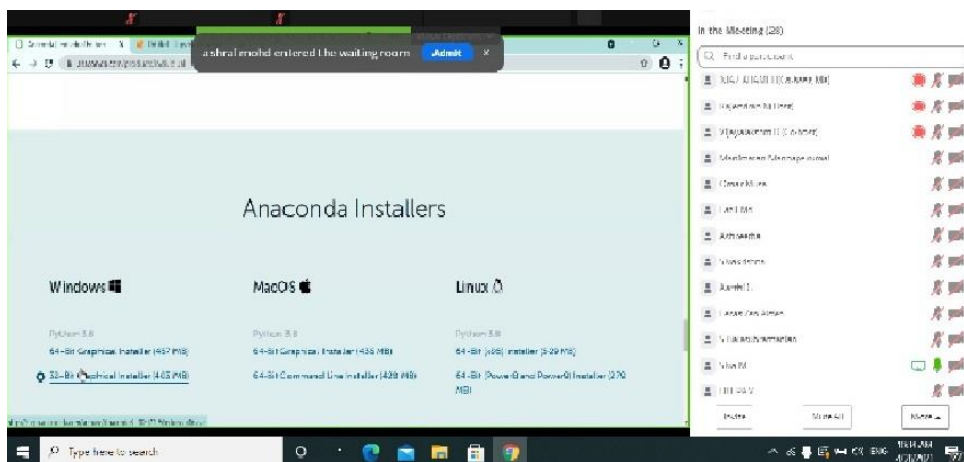
Date and Timing: 28.4.2021 and 10.30 am to 12.30 pm

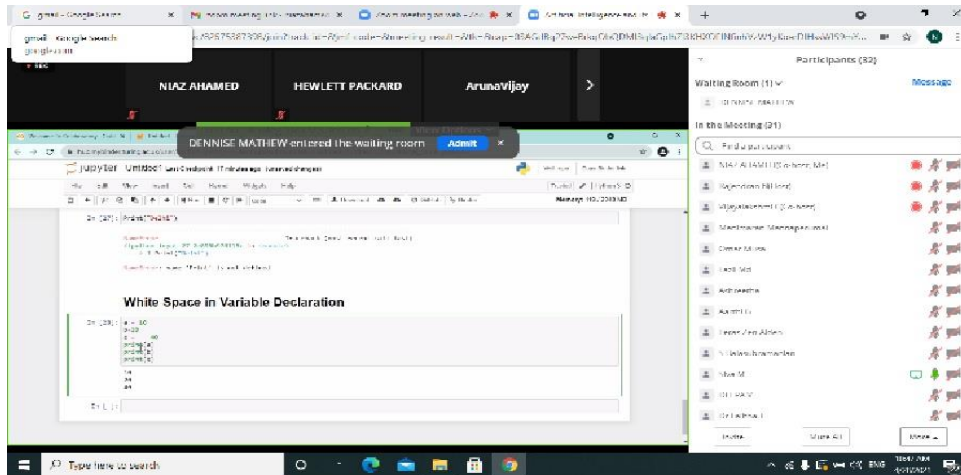
Chief Guest: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai

Session Coordinators: Ms. C. Vijayalakshmi, AP (Sr.Gr.)/ CSE Mr. V.M. Niaz Ahamed, AP/ CA

The session started at 10.30 am, Mrs.Vijayalakshmi AP/CSE introduced the resource person. Mr.Siva Prasath started his session at 10.35 am, he briefed about python using Jupyter online tool and gave hands on lecture about the following:

1. Declaring variables
2. Case Sensitive
3. White Space variable declaration
4. Type Casting
5. Data type
6. Operators
7. Input reading
8. Conditional Statements
9. For loop
10. Functions
11. List functions





Day 3 AN:

Session Topic: Introduction to Numpy and Pandas, Predictive Analysis, Linear Regression, Logistic Regression and Model Creation

Date and Timing: 28.4.2021 and 2.00 pm to 4.00 pm

Chief Guest: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai

Session Coordinators: Dr. V. Muthu Priya, AP (Sel.Gr.)/ CSE Mr. J. Ravinder, AP/ M & AS

The objective of the session is to implement predictive analysis and different regression techniques using NumPy and Pandas library functions in Python.

The following points were discussed in the session:

- The comparative study on Artificial Intelligence, Deep learning, Machine learning and Data Science.
- The importance of Artificial Intelligence (AI) and Machine learning with real time scenario.
- The difference between regression and classification in machine learning.
- The need for increasing the training sample to improve the accuracy.
- The implementation of following steps in training the dataset and creating AI system model using Python code.

Step 1: Importing NumPy and Pandas Libraries

Step 2: Reading the data set

Step 3: Separating the features and target.

Step 4: Splitting the data set in to training set and test set

Step 5: Creating the AI system model

Step 6: Testing the model.

At the end of this session, the participants gained knowledge on different regression techniques and understand the need for training the data set to achieve accuracy in machine learning. Also know about steps involved in generating and testing the AI system model.

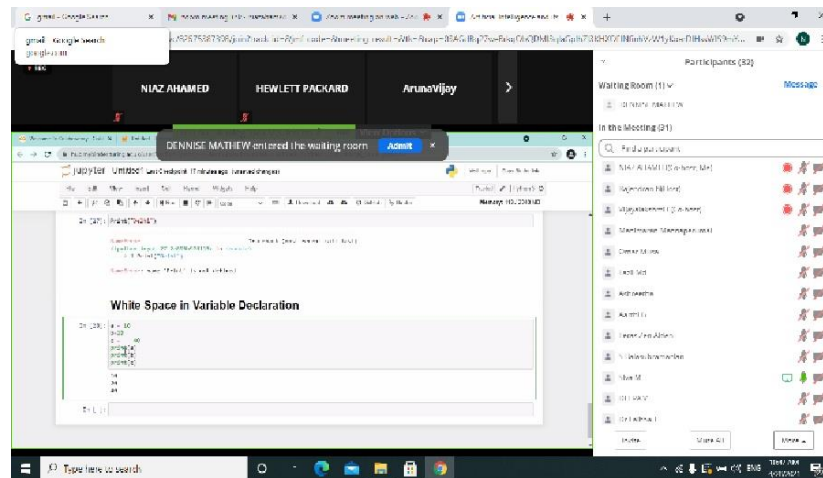


Fig. Python Demo using Jupyter

DAY 4 FN:

Session Topic: Industry 4.0: Cyber Security and Privacy Challenges

Date and Timing: 29.4.2021 10.30 am to 12.45 pm

Chief Guest: Dr. Sibi Chakkaravarthy S, Cyber Security Consultant

Session Coordinators: Mrs. J.Brindha Merin, AP(Sr.G)/CSE and Dr. K.A. Varun Kumar, AP/ IT

The fourth day session was handled by Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant on the topic “Industry 4.0: Cyber Security and Privacy Challenges”.

Dr.Varun Kumar introduced the Chief Guest of the session Dr. Sibi Chakkaravarthy. He has a very good research experience in the field of Network and Cyber Security attacks.

Dr. Sibi Chakkaravarthy gave a brief introduction about Industry 4.0 and the security issues related to it and the challenges the industry is facing. He explained about cyber security and its challenges. He briefed about the current technologies and their security issues. Also he explained about cyber kill chain, attack vectors and attack models. He gave some real time examples and demonstrated the attacks by executing the code and explained the concepts to the audience. He

gave examples about cyber-attacks through GPS and also demonstrated BlackPanther. He briefed about how AI can be maliciously used and discussed a case study on buffer flow vulnerability, The session was very informative and several participants interacted with the chief guest by asking questions. Finally the session got concluded at 12.45 pm and Dr. Varun Kumar thanked the resource person and the participants.

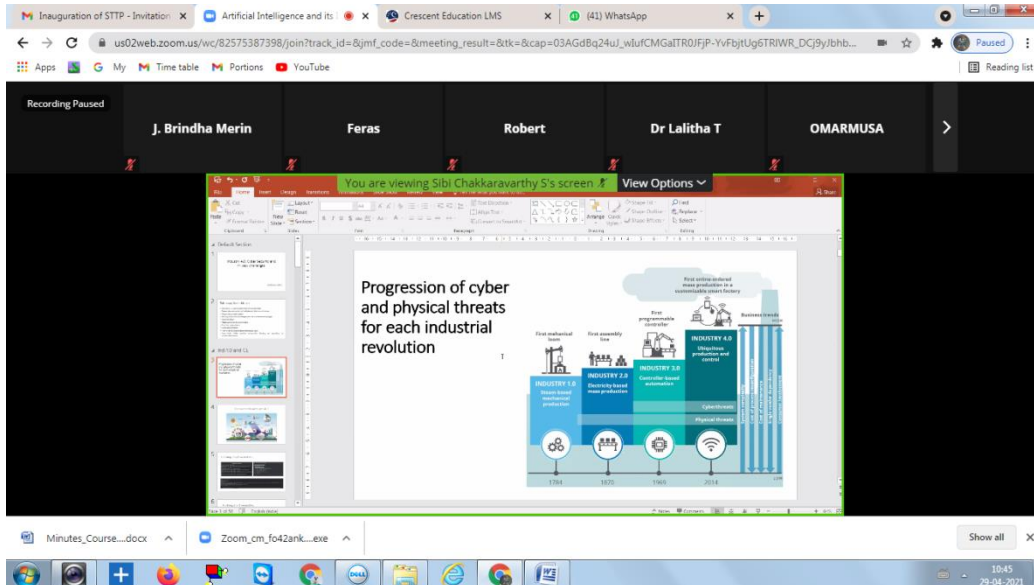


Fig: Introduction to Cyber Threats

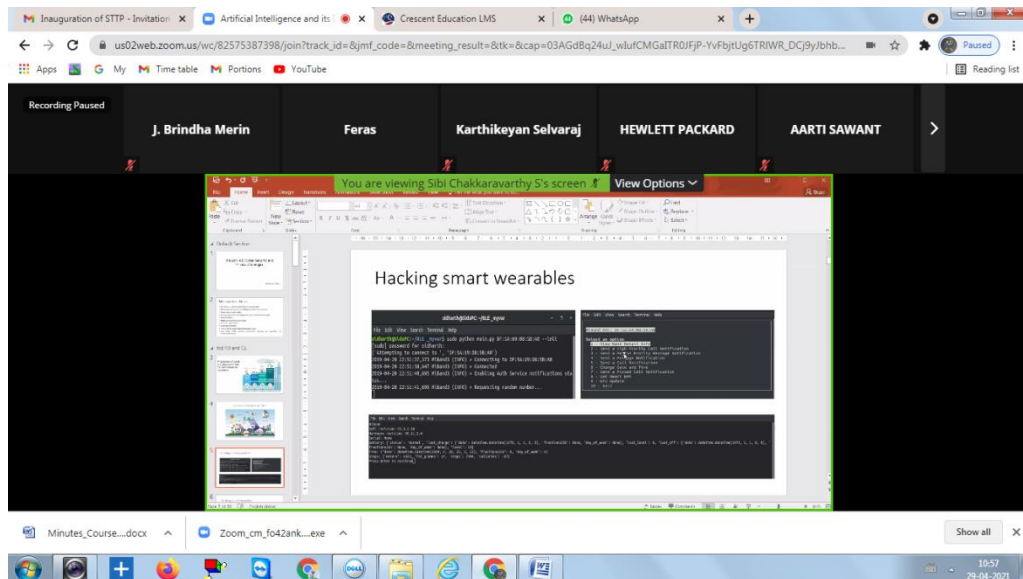


Fig: Hacking Smart Wearable

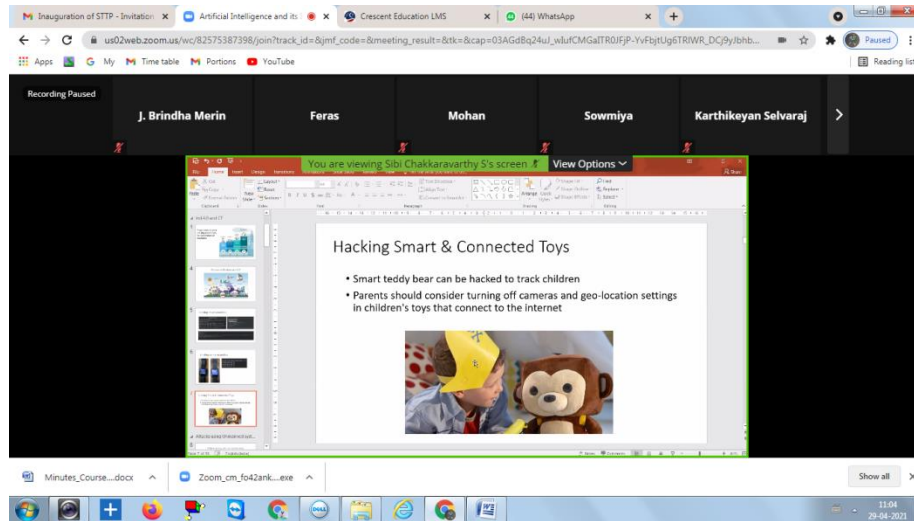


Fig: Hacking Smart and Connected Toys

DAY 4 AN:

Session Topic: AI Powered Malware Analysis

Date and Timing: 29.4.2021 and 2.00 pm to 4.00 pm

Chief Guest: Dr. Sibi Chakkaravarthy S, Cyber Security Consultant

Session Coordinators: Ms. R. Akila, AP (Sr.Gr.)/ CSE Ms. A. Radhika, AP/ CSE

The session mainly focused on the advancements in artificial intelligence (AI) technologies include tremendous growth in innovation and automation. This session also gave insight on the AI technologies, which enable larger-scale and more powerful attacks.

The following points were discussed in the session:

- AI and ML misuses and abuses at present.
- How can we prevent device from becoming infected with malware in day today life
- Detailed on present day security system : EMT, Controlled folder access, Inbuilt antivirus, Application Scanners
- A comprehensive matrix of tactics and techniques used by threat hunters, and defenders to better classify attacking and assess

At the end of this session, the participants are able to have knowledge on how malware is reacting. Also they understand the firewall mechanism system and steps involved in the darker side of AI system model.

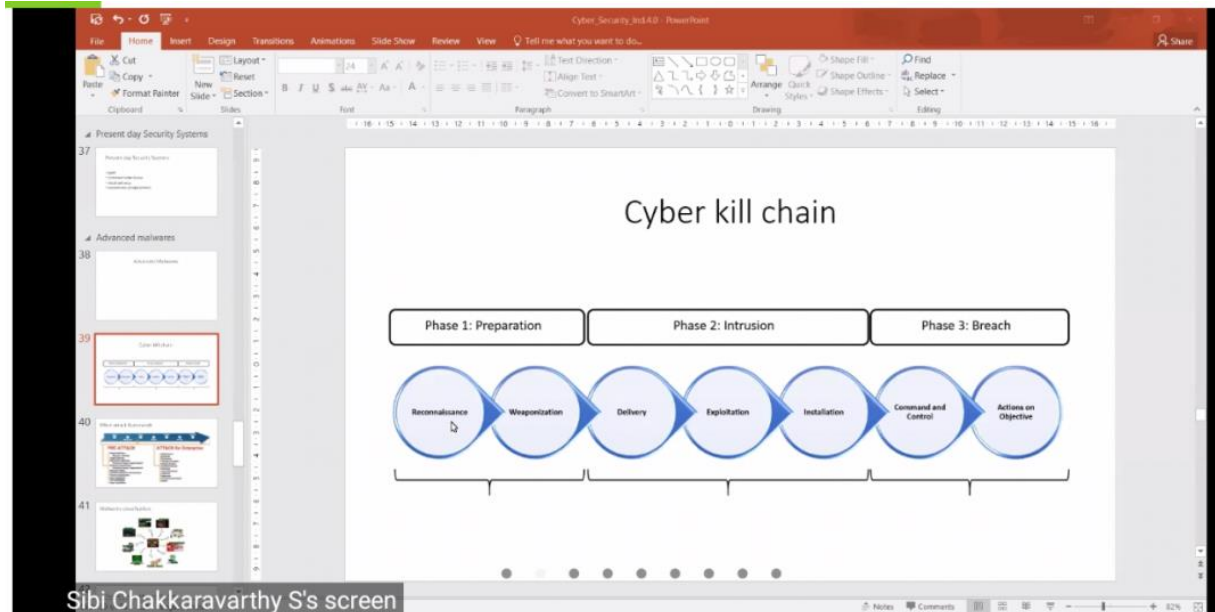


Fig: Cyber Kill Chain

Day 5 FN:

Session Topic: Introduction to Blockchain Technology

Date and Timing: 30.4.2021 and 10.30 to 11.30 am

Chief Guest: Mr. Arshad Sarfarz Ariff, Senior Technology Architect, Infosys Ltd.

Session Coordinators: Dr. Shakila Anjum, AP/ CA Dr. M. Mohamed Divan Masood, AP/ CA

The speaker started with examples of the basics of blockchain and explained a blockchain from its structure. Blockchains are used for recording transactions made with cryptocurrencies and have many other applications. Blockchain concepts such as Hashing, consensus, wallet, platforms were discussed in detail. Platforms like Ethereum, Hyperledger and corda were the main categorization of blockchain technology. While concluding, he explained where blockchain fits in the industry 4.0.



Zoom Meeting | You are viewing Arshad Sarfarz's screen | View Options

Dr.Shakila Anjum | Arshad Sarfarz | ashraf mohd | Pooja deshmu | TONY

BLOCKCHAIN CONCEPTS — HASHING

- Hashing is the process of converting 1 given input into another value using a mathematical algorithm
- A hash function is any function that can be used to map data of arbitrary size to fixed-size values.

Input | **Hash sum**

fox	Hash function	D6CD3454 BBEA788A 751A696C 24D97009 CA992D17
The red fox jumps across the age	Hash function	52ED878E 78F71D92 6EB6957D DBE03CE4 CAB945D3
The red fox walks across the age	Hash function	A6042841 935C7F8D 9158545A B94AE214 26EB3CEA

Customer enters account details
Company stores details with password hash key
Hashing Algorithm
Company User DB
Cracker steals account details including hash key but not the password! Details not enough to hack other sites

Participants (26)

FM	Fazil Md	🔇
FZ	Feras Zen Alden	🔇
HP	HEWLETT PACKARD	🔇
KS	Karthikeyan Selvaraj	🔇
MM	Manimaran Mannaperumal	🔇
M	Mohan	🔇
OM	Omar Musa	🔇
PD	Pooja deshmu	🔇
RS	Revathi S	🔇
SM	snehal mane	🔇
T	TONY	🔇
VM	Victor Munigety	🔇
R	Robert	🔇

Zoom Meeting | You are viewing Arshad Sarfarz's screen | View Options

Dr.Shakila Anjum | Arshad Sarfarz | ashraf mohd | TONY | Karthikeyan Sel...

BLOCKCHAIN CONCEPTS — CONSENSUS

- Process used to reach common agreement between all the peers of the Blockchain network

Proof of Work | **Proof of Stake**

Solve a puzzle

Participants (22)

D	Deepika.A	🔇
DJ	Dhanalakshmi J	🔇
FM	Fazil Md	🔇
FZ	Feras Zen Alden	🔇
HP	HEWLETT PACKARD	🔇
KS	Karthikeyan Selvaraj	🔇
MM	Manimaran Mannaperumal	🔇
M	Mohan	🔇
RS	Revathi S	🔇
SM	snehal mane	🔇
T	TONY	🔇
VM	Victor Munigety	🔇
R	Robert	🔇

Zoom Meeting | You are viewing Arshad Sarfarz's screen | View Options

Dr.Shakila Anjum | Arshad Sarfarz | ashraf mohd | TONY | Karthikeyan Sel...

BLOCKCHAIN CONCEPTS — WALLET

- Blockchain wallets are repository for storing public keys and private keys
- Mechanism for safeguarding your Blockchain Accounts

Alice | **Bob**

Sign | Verify

Alice's private key | Alice's public key

Press ALT to show or hide meeting controls

Participants (21)

A	Ashreetha	🔇
D	Deepika.A	🔇
DJ	Dhanalakshmi J	🔇
FM	Fazil Md	🔇
FZ	Feras Zen Alden	🔇
HP	HEWLETT PACKARD	🔇
KS	Karthikeyan Selvaraj	🔇
MM	Manimaran Mannaperumal	🔇
M	Mohan	🔇
OM	OMARMUSA	🔇
SM	snehal mane	🔇
T	TONY	🔇
VM	Victor Munigety	🔇
R	Robert	🔇

Day 5 AN:

Session Topic: Valedictory & Keynote address on “Blockchain Technology in Industry 4.0”

Date and Timing: 30.4.2021 and 2.30 pm to 3.35 pm

Chief Guest: Mr. Raj Kapoor, Founder, India Blockchain Alliance

Session Coordinators: Dr. A.K. Reshmy, AP/ CA and Dr. V.J. Sowmya, AP/ CA

The final session of the STTP program on “Artificial Intelligence and its Impact on Industry 4.0”, started with a session on “Block chain Technology in Industry 4.0” at 14.30.

Prof. Dr. Gufran Ahamed Ansari, Dept of CA, gave the welcome address and Dr. Venkatesan Selvam, Dean of School of Computer, Information and Mathematical Sciences delivered the presidential address.

Dr. V.J. Sowmya, Assistant Professor/CA department introduced the speaker of the session. The session was handled by Mr. Raj Kapoor, Founder, India Blockchain Alliance.

The speaker of the session has presented the keynote address on “Block chain technology”. The session started with the Introduction to the World Block chain. He projected a clear understanding of the importance of block chain technology and future trends in the real world. He inspired the audience with topics such as new trends in applying block chain technology role in Artificial intelligence approaches for business decisions and incorporation of block chain technology.

He discussed block chain technology influence in Banking, government sectors, Retail shops, Manufacturing units, supply chain management, Logistics, Health care and Real estate sectors. He explained the basic concepts used in the technology relating with best suitable real life examples which are essential for the understanding of technology. He also discussed about the cloud technology storage systems, that is access the large data sets their seamless management, and data security are fundamental elements in the growth of AI. Additionally, he gave an idea about the AI based projects need to store data on decentralized servers on the cloud to solve the centralized data storage.

Another main aspect is NITI Aayog, He explained it well that is the forefront of promoting adoption of frontier technologies through demonstration of their efficacy. In this part of the ‘Block chain: The India Strategy’, various learnings from pilot initiatives and consultations undertaken over the last two years have been highlighted.



The screenshot shows a Zoom meeting in progress. The main window displays a presentation slide with the title "AN INTRODUCTION TO THE WORLD OF BLOCKCHAIN". The slide features a 3D visualization of glowing blue and yellow cubes in a dark space. The Zoom interface includes a list of participants on the right, a name tag for "Raj Kapoor", and a bottom toolbar with icons for muting, video, chat, and other functions.

This screenshot shows a Zoom meeting with a speaker in the foreground. The speaker is a man with a mustache wearing a yellow patterned shirt. The background shows a bookshelf and a window with patterned curtains. On the right side, the Zoom participant list is visible, showing names like Sowmya VI, Rajendran N, and Raj Kapoor. The name tag "Raj Kapoor" is also present.

The screenshot displays a Zoom meeting with a presentation slide titled "Blockchain Role in AI Technology". The slide is divided into several sections: "THE CURRENT LANDSCAPE OF AI", "Blockchain Role in AI Technology", "Notable Blockchain AI Vendors" (listing Cortex, Golem, Axiom, SONM, and T143), and "Blockchain Role in AI Technology" (listing various use cases). A woman in a grey blazer is shown on the right side of the slide, pointing at the content. The Zoom interface shows a participant list on the right and a chat window at the bottom with a message: "Good afternoon to one and all present here".

This information had been very useful to know about, how our government has been stimulating the new technologies for developing India. By empowering citizens through features of transparency, decentralization and accountability, block chain would help in improving ease of living. He shared his tremendous knowledge on Block chain technology, cryptocurrency, bitcoin, cloud storage decentralized systems. Also, he shared the opportunities of this technology to youngsters.

The session ended with the question-and-answer session. The speaker clarified the queries of the audience. The audience shared their experience of this knowledgeable STTP session and they shared their thanks for arranging this short time training program by SCIMS, BSACIST. At the end of this successful session, Dr. S. Revathi, Prof./ CSE, proposed the vote of thanks.

2. Online Participants Registration Process for Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0

The Brochure highlighting the necessary information about the Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0, was designed and circulated.



The brochure features a dark blue background with a glowing blue silhouette of a human head in profile, facing right. The background is overlaid with a network of blue and white lines representing data or technology. At the top, there are three logos: '37 YEARS OF ACADEMIC EXCELLENCE', 'INSTITUTION'S INNOVATION COUNCIL', and the 'Crescent Institute of Science & Technology' logo. The main text is centered and reads: 'Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on INDUSTRY 4.0'. Below this, it says '(Technologies and Solution Methodologies for Real-world Scenarios)' and '(26.04.2021 to 30.04.2021)'. At the bottom, it states 'Organised by School of Computer, Information & Mathematical Sciences'.

The Brochure is displayed below:

Patrons
 Dr. A. Peer Mohamed, Vice Chancellor
 Dr. A. Azad, Registrar

Convener
 Dr. Venkatesan Selvam, Dean / SCIMS

Advisory Committee
 Dr. E. Syed Mohamed, HoD / CSE
 Dr. I. Sathik Ali, HoD / IT
 Dr. Latha Tamiliselvan, HoD / CA
 Dr. S. Rajasekaran, HoD / Mathematics & AS

Coordinators
 Dr. Gufran Ahmad Ansari, Prof. / CA & Director (CFSC)
 Dr. S. Revathi, Prof. / CSE
 Dr. N. Ayyanathan, Assoc. Prof. / CA

Co-coordinators
 Mr. N. Rajendran, AP (Sr.Gr.) IT
 Dr. A. Ramachandran, AP/ CSE
 Mr. V.M. Niaz Ahmed, AP/ CA

Organizing Committee
 Dr. V. Muthu Priya, AP (Sel.Gr.) CSE
 Ms. C. Vijayalakshmi, AP/ CSE
 Ms. J. Brindha Merin, AP/ CSE
 Ms. A. Radhika, AP/ CSE
 Mr. V. Balaji, AP/ CSE
 Ms. R. Akila, AP/ CSE
 Dr. P. Gnanasekaran, AP/ IT
 Ms. A. Sonya, AP/ IT
 Dr. K.A. Varun Kumar, AP/ IT
 Mr. A. Salman Ayaz, AP/ CA
 Dr. Shakila Anjum, AP/ CA
 Dr. A.K. Reshmy, AP/ CA
 Dr. S. Srisakthi, AP/ CA
 Dr. V.J. Sowmya, AP/CA
 Ms. Preeti Verma, AP/ CA
 Dr. M. Mohamed Divan Masood, AP/ CA
 Dr. Mahadev Ota, AP (Sr.Gr.) M & AS
 Ms. A. Sagaya Suganya, AP/ M & AS
 Mr. J. Ravinder, AP/ M & AS

For Contact
 Dr. N. Ayyanathan, Assoc. Prof. / CA
 Ph: 91082 89073 Email: n.ayyanathan@crescent.education
 Dr. A. Ramachandran, AP/ CSE
 Ph: 93443 67021 Email: ramachandran@crescent.education

Technical Sessions

Introduction to Industry 4.0 and AI
"The Fourth Industrial Revolution, also known as Industry 4.0, is radically changing the way we work and live."

Industry 4.0 Applications in Image Processing
"The Future is Smart – Image Processing is an Important Component of Industry 4.0"

Role of Industry 4.0 in Digital Marketing
"Digital marketing is any form of marketing that exists online. It's how you'll find the modern audience and your potential customers"

IoT Powered Energy Analytics
"Industry 4.0 and power management – more than a matter of energy efficiency, costs and continuity"

IoT for Computational Intelligence
"Internet of Things is transforming the everyday physical objects that surround us into an ecosystem of information that will enrich our lives"

Cyber Security Attacks Detection and Mitigation
"Technology trust is a good thing, but control is a better one"

AI Powered Malware Analysis
"Signature-based malware detection is dead. Machine learning based Artificial Intelligence is the most potent defense the next gen adversary and the mutating hash"

Advanced Machine Learning Techniques
"Machine and Deep Learning will create a new set of 'hot jobs in the next five years"

Bringing Blockchain Technology into Industry 4.0
"It provides a very high level of safety and security when it comes to exchanging data, information, and money"

Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on INDUSTRY 4.0
(Technologies and Solution Methodologies for Real-world Scenarios)
(03.05.2021 to 07.05.2021)
 Organised by
School of Computer, Information & Mathematical Sciences

in association with

ICTACADEMY
 Address for Communication
Dean (SCIMS)
 B.S. Abdur Rahman Crescent Institute of Science and Technology
 Vandalur, Chennai 600 048
 dean_scis@crescent.education
 www.crescent.education

About the Institution
 B. S. Abdur Rahman Crescent Institute of Science & Technology is a renowned quality leadership institution located at the greenest spot in Chennai near Tambaram. Through its long history of 37 years of excellence, the institution has offered access to a wide range of academic opportunities. With all 55 programs, grouped under 12 different schools, 30 UG programmes, 25 PG programmes and Ph.D. (in all departments), the institution is a rising stalwart in higher education with promising quality, security and placement. We welcome students from all countries and our educational programs are designed to equip the learners with virtual knowledge that helps them to achieve what they want to be and go where they want to go in the ladder of success.

About the School
 The School of Computer, Information and Mathematical Sciences (SCIMS) endeavour for excellence in creating, applying and imparting knowledge in the field of Computer Science through comprehensive educational programmes. The SCIMS offers the following Programmes:

UG Programmes	PG Programmes
<ul style="list-style-type: none"> • B.Tech. (CSE) • B.Tech. (AI & DS) • B.Tech. CSE (IoT) • B.Tech. CSE (Cyber Security) • B.Tech (IT) • BCA (Cloud Technology & Information Security) • BCA (Data Science) • BCA (Mobile App. & Information Security) • BCA (Multimedia & Web App. Development) • B.Sc. (Computer Science) 	<ul style="list-style-type: none"> • M.Tech. (CSE) • M.Tech. (IT) • MCA • M.Sc. (AS)
	Ph.D Programme
	in all disciplines

About the Programme
 A five day Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0 is scheduled with an objective to provide the necessary knowledge and skills to apply the AI techniques to real-world problems using interdisciplinary approach with hands-on sessions. The complexity of using artificial intelligence in industrial automation requires

that manufacturers collaborate with specialists to reach customized solutions.

This STTP introduces the Industry 4.0 based solution methodologies using cutting-edge AI technologies in automation and data exchange in Manufacturing, Power Systems & Energy Analytics, Transportation service, Healthcare, Financial service, Insurance, Mining, Consumer Packaged Goods, Social Service Applications. The STTP also covers Cyber Security technologies and their industrial applications.



Industry 4.0

Programme Objectives
 The STTP is intended to emphasize the importance of AI techniques and Industry 4.0

- To introduce Industry 4.0 concepts.
- To apply inter-disciplinary research perspectives.
- To understand prevention and countermeasures of various cyber-attacks, tools and techniques.
- To impart knowledge on machine learning techniques to be applied in real-world applications.
- To understand IoT concepts, underlying technologies, and migration of M2M to IoT and analyze the various features of IoT standard protocols and platforms.

Programme Outcomes
 Upon completion of the Short Term Training Programme, the participants will be able to

- Provide solution methodology with respect to Industry 4.0 requirements for the undertaken energy projects.
- Aware of the Cyber Security attacks and mitigation techniques.
- Know how to process massive amounts of data that are available both in structured and unstructured forms and how to analyze those data in an iterative, as well as in a time-sensitive manner.
- Able to use the cloud platforms and interface IoT with cloud platforms.
- Classify the data using Big data techniques and capture the data through IoT devices and store on cloud for further processing.

Who can attend ?

- Students from all branches of Engineering, Arts & Science
- Research Scholars
- Faculty Members
- Industry Persons

Registration
 Registration Fee: **Rs.500/-**

Account Details
 Account Name: Registrar,
 B.S. Abdur Rahman Crescent Institute of Science and Technology
 Account Number: 16570200000440
 Account Type: Current Account
 IFSC: 1080001657
 Bank Name: Indian Overseas Bank
 Branch Name: Vandalur



For Registration:
 Scan or click on the QR Code.

Resource Persons
 Industry Professionals and Academicians from reputed organizations.

[SCIMS Web link](#)

3. Registration Details

Registration Fee is Rs. 500 for the participants attending this Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0. Interested participants were requested to register their details in a google form which was shared through the link https://docs.google.com/forms/d/e/1FAIpQLSeR7_bIJOjD81L2-9YeLFpqARsjs44Ha7VbhVxOBU72pBSlw/viewform

A total of 44 participants has registered and attended this online session. The participants are from the following institutions.

- Anna University
- B. S. Abdur Rahman Crescent Institute of Science and Technology
- Bharati Vidyapeeth Deemed to be University, College of Engineering, Pune
- Chennai Institute of Technology
- CWC Implementation Indian Chemical Council
- DDE, ALAGAPPA UNIVERSITY
- Dhanalakshmi Srinivasan Engineering College
- Jain University
- Koneru Lakshmaiah Education Foundation
- NIIS INSTITUTE OF BUSINESS ADMINISTRATION
- PBR VITS, Kavali
- S V COLLEGE OF ENGINEERING
- Saveetha School of Engineering, SIMATS
- SHREE INSTITUTE OF TECHNICAL EDUCATION
- SRM Institute of Science and Technology
- SSN College of Engineering
- Unitar International University
- Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology

The details of confirmed participants are given in [Annexure A](#).

4. Certification for the Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0

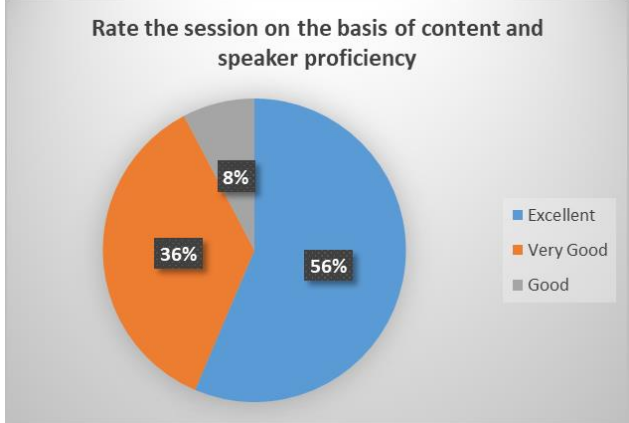
The certificates was distributed to the participants who have 80% of attendance and attended the Technical Quiz conducted during the last day of Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0.

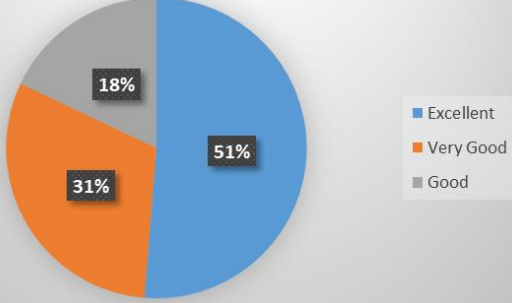
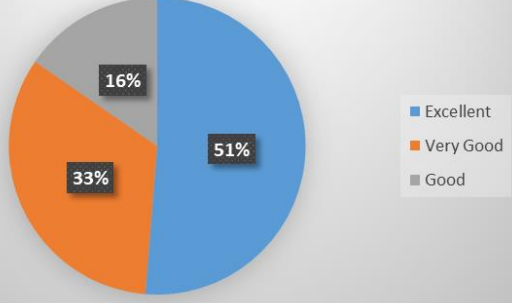
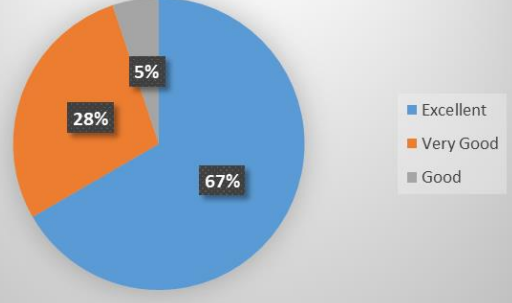
The sample certificate issued to the participants after the successful completion of the STTP, is given in [Annexure B](#).

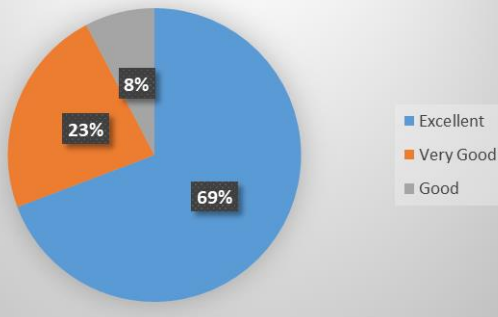
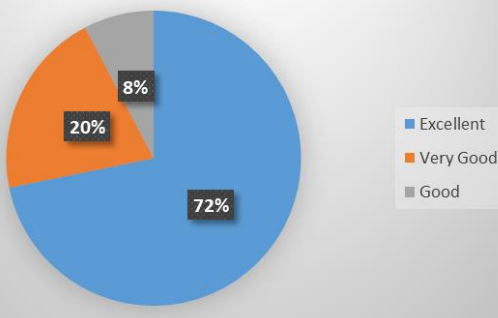
5. Analysis of Feedback from participants for Five Day Online Short Term Training Programme on Artificial Intelligence and its Impact on Industry 4.0

The feedback about the STTP was collected from the participants in session wise each day, in order to improve the further conduct of these types of events.

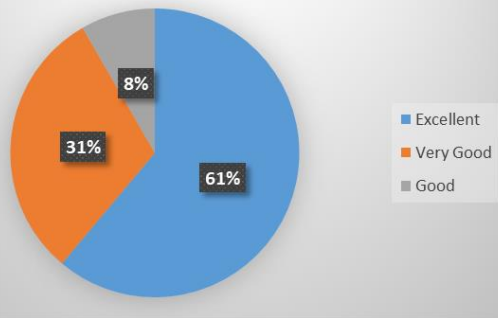
Day 1:

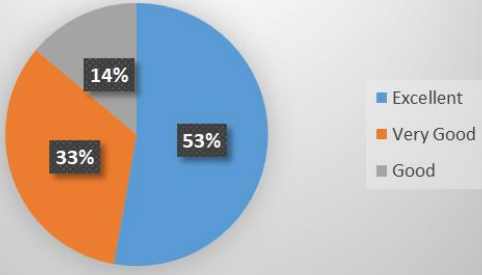
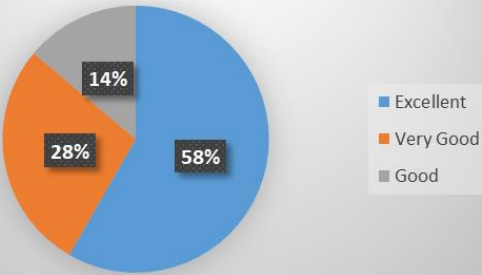
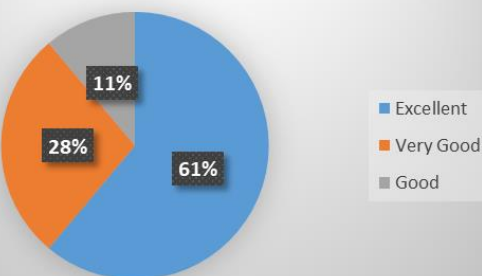
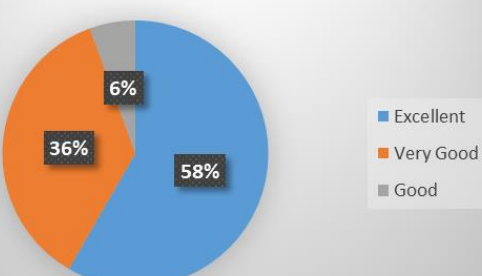
Feedback Points	Analysis	Inference								
Session I: "Industry 4.0 Applications in Image Processing" Resource person: Dr. Mohanraj Vengadachalam, Data Scientist, Standard Chartered. [Rate the session on the basis of content and speaker proficiency]	<div style="text-align: center;"> <p>Rate the session on the basis of content and speaker proficiency</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Session Rating Data</caption> <thead> <tr> <th>Rating</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>56%</td> </tr> <tr> <td>Very Good</td> <td>36%</td> </tr> <tr> <td>Good</td> <td>8%</td> </tr> </tbody> </table> </div>	Rating	Percentage	Excellent	56%	Very Good	36%	Good	8%	56% of the participants felt session was excellent and 36% felt it was very good. Almost 92% of the participants are very satisfied with this session.
Rating	Percentage									
Excellent	56%									
Very Good	36%									
Good	8%									

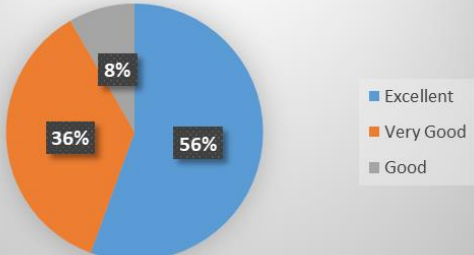
<p>Session I: "Industry 4.0 Applications in Image Processing" Resource person: Dr. Mohanraj Vengadachalam, Data Scientist, Standard Chartered. [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>51%</td> </tr> <tr> <td>Very Good</td> <td>31%</td> </tr> <tr> <td>Good</td> <td>18%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	51%	Very Good	31%	Good	18%	<p>The session was able to improve their knowledge and skill in an excellent way for 51% of the participants, and 31% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	51%									
Very Good	31%									
Good	18%									
<p>Session I: "Industry 4.0 Applications in Image Processing" Resource person: Dr. Mohanraj Vengadachalam, Data Scientist, Standard Chartered. [Were your questions been answered during the session]</p>	<p style="text-align: center;">Were your questions been answered during the session</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>51%</td> </tr> <tr> <td>Very Good</td> <td>33%</td> </tr> <tr> <td>Good</td> <td>16%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	51%	Very Good	33%	Good	16%	<p>84% of the participants agreed that their queries were answered by the experts during the session.</p>
Category	Percentage									
Excellent	51%									
Very Good	33%									
Good	16%									
<p>Session II: "Role of Industry 4.0 in Digital Marketing" Resource person: Mr. V.J. Saravanan, Digital Marketing Strategist, Founder - Managing Director, Foursteps Training Solutions [Rate the session on the basis of content and speaker proficiency]</p>	<p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>67%</td> </tr> <tr> <td>Very Good</td> <td>28%</td> </tr> <tr> <td>Good</td> <td>5%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	67%	Very Good	28%	Good	5%	<p>56% of the participants felt session was excellent and 36% felt it was very good. Almost 92% of the participants are very satisfied with this session.</p>
Category	Percentage									
Excellent	67%									
Very Good	28%									
Good	5%									

<p>Session II: "Role of Industry 4.0 in Digital Marketing" Resource person: Mr. V.J. Saravanan, Digital Marketing Strategist, Founder - Managing Director, Foursteps Training Solutions [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>69%</td> </tr> <tr> <td>Very Good</td> <td>23%</td> </tr> <tr> <td>Good</td> <td>8%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	69%	Very Good	23%	Good	8%	<p>The session was able to improve their knowledge and skill in an excellent way for 51% of the participants, and 31% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	69%									
Very Good	23%									
Good	8%									
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Category	Percentage									
Excellent	72%									
Very Good	20%									
Good	8%									

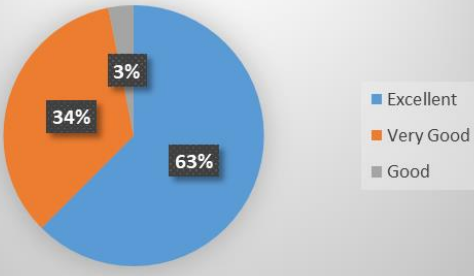
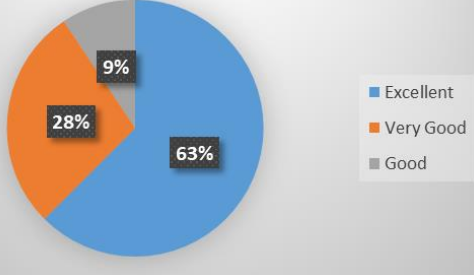
Day 2:

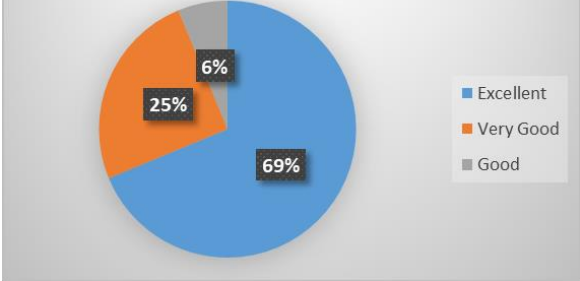
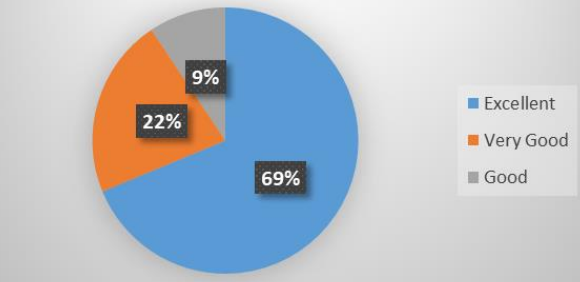
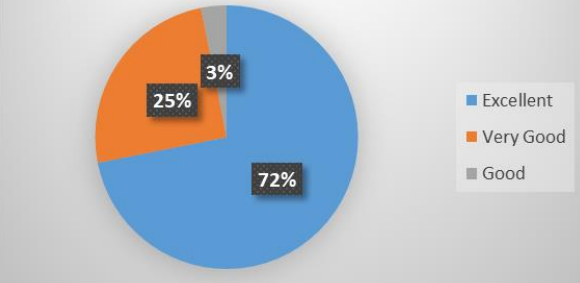
Feedback Points	Analysis	Inference								
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Category	Percentage									
Excellent	61%									
Very Good	31%									
Good	8%									

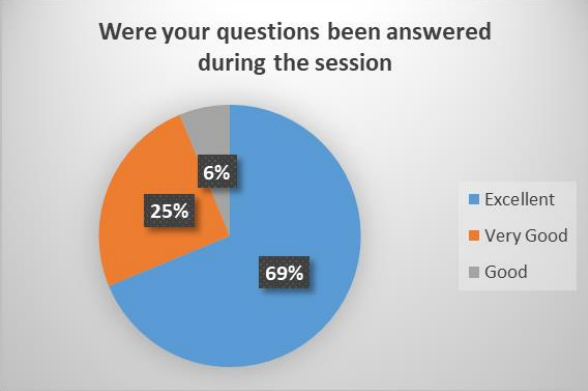
<p>Session I: "IoT Powered Energy Analytics " Resource person: Dr. M.P. Selvan, Professor, NIT, Trichy. [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>53%</td> </tr> <tr> <td>Very Good</td> <td>33%</td> </tr> <tr> <td>Good</td> <td>14%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	53%	Very Good	33%	Good	14%	<p>The session was able to improve their knowledge and skill in an excellent way for 53% of the participants, and 33% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	53%									
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Category	Percentage									
Excellent	58%									
Very Good	28%									
Good	14%									
<p>Session II: "IoT for Computational Intelligence" Resource person: Ms. R. Ramakala, IoT Trainer, Skill Technika [Rate the session on the basis of content and speaker proficiency]</p>	<p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>61%</td> </tr> <tr> <td>Very Good</td> <td>28%</td> </tr> <tr> <td>Good</td> <td>11%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	61%	Very Good	28%	Good	11%	<p>61% of the participants felt session was excellent and 28% felt it was very good. Almost 92% of the participants are very satisfied with this session.</p>
Category	Percentage									
Excellent	61%									
Very Good	28%									
Good	11%									
<p>Session II: "IoT for Computational Intelligence" Resource person: Ms. R. Ramakala, IoT Trainer, Skill Technika [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>58%</td> </tr> <tr> <td>Very Good</td> <td>36%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	58%	Very Good	36%	Good	6%	<p>The session was able to improve their knowledge and skill in an excellent way for 58% of the participants, and 36% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	58%									
Very Good	36%									
Good	6%									

<p>Session II: "IoT for Computational Intelligence" Resource person: Ms. R. Ramakala, IoT Trainer, Skill Technika [Were your questions been answered during the session]</p>	<p style="text-align: center;">Were your questions been answered during the session</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>56%</td> </tr> <tr> <td>Very Good</td> <td>36%</td> </tr> <tr> <td>Good</td> <td>8%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	56%	Very Good	36%	Good	8%	<p>92% of the participants agreed that their queries were answered by the experts during the session.</p>
Category	Percentage									
Excellent	56%									
Very Good	36%									
Good	8%									

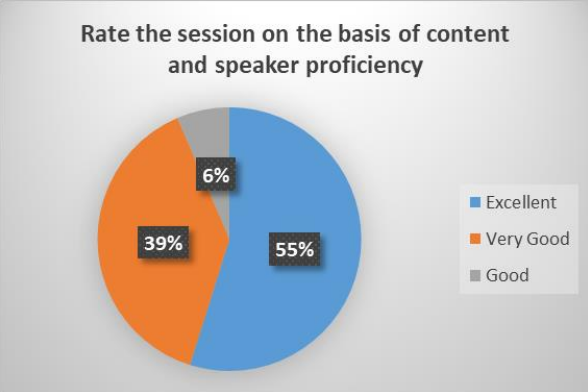
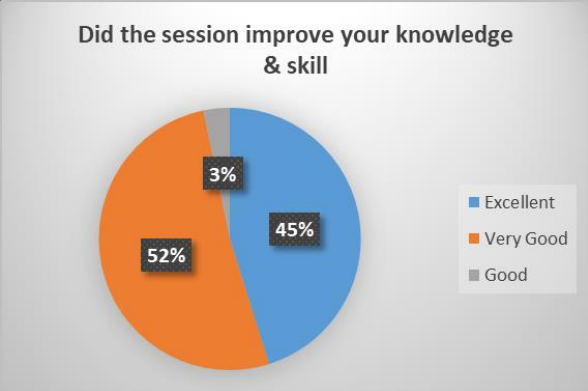
Day 3:

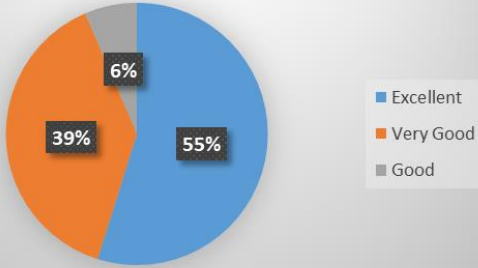
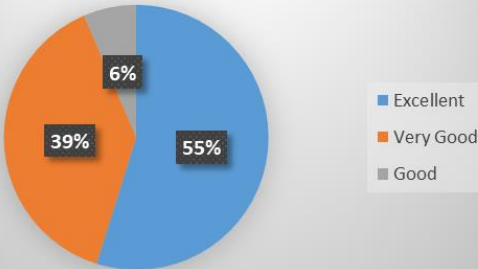
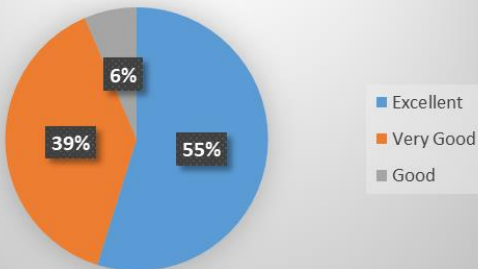
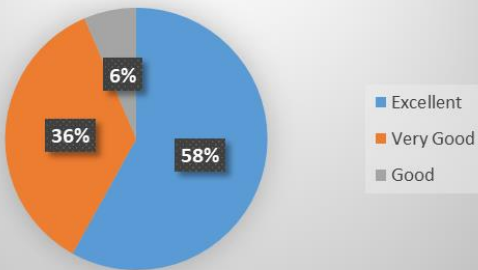
Feedback Points	Analysis	Inference								
<p>Session I: "Advanced Machine Learning Techniques Data Science, Data Analytics, AI & Python Basics" Resource person: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai. [Rate the session on the basis of content and speaker proficiency]</p>	<p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>63%</td> </tr> <tr> <td>Very Good</td> <td>34%</td> </tr> <tr> <td>Good</td> <td>3%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	63%	Very Good	34%	Good	3%	<p>63% of the participants felt session was excellent and 34% felt it was very good. Almost 97% of the participants are very satisfied with this session.</p>
Category	Percentage									
Excellent	63%									
Very Good	34%									
Good	3%									
<p>Session I: "Advanced Machine Learning Techniques Data Science, Data Analytics, AI & Python Basics" Resource person: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai. [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>63%</td> </tr> <tr> <td>Very Good</td> <td>28%</td> </tr> <tr> <td>Good</td> <td>9%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	63%	Very Good	28%	Good	9%	<p>The session was able to improve their knowledge and skill in an excellent way for 63% of the participants, and 28% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	63%									
Very Good	28%									
Good	9%									

<p>Session I: "Advanced Machine Learning Techniques Data Science, Data Analytics, AI & Python Basics" Resource person: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai. [Were your questions been answered during the session]</p>	<p style="text-align: center;">Were your questions been answered during the session</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>69%</td> </tr> <tr> <td>Very Good</td> <td>25%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	69%	Very Good	25%	Good	6%	<p>84% of the participants agreed that their queries were answered by the experts during the session.</p>
Category	Percentage									
Excellent	69%									
Very Good	25%									
Good	6%									
<p>Session II: "Introduction to Numpy and Pandas, Predictive Analysis, Linear Regression, Logistic Regression and Model Creation" Resource person: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai [Rate the session on the basis of content and speaker proficiency]</p>	<p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>69%</td> </tr> <tr> <td>Very Good</td> <td>22%</td> </tr> <tr> <td>Good</td> <td>9%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	69%	Very Good	22%	Good	9%	<p>69% of the participants felt session was excellent and 22% felt it was very good. Almost 91% of the participants are very satisfied with this session.</p>
Category	Percentage									
Excellent	69%									
Very Good	22%									
Good	9%									
<p>Session II: "Introduction to Numpy and Pandas, Predictive Analysis, Linear Regression, Logistic Regression and Model Creation" Resource person: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>72%</td> </tr> <tr> <td>Very Good</td> <td>25%</td> </tr> <tr> <td>Good</td> <td>3%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	72%	Very Good	25%	Good	3%	<p>The session was able to improve their knowledge and skill in an excellent way for 72% of the participants, and 25% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	72%									
Very Good	25%									
Good	3%									

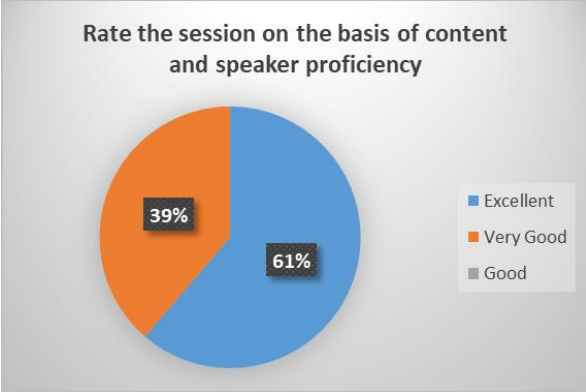
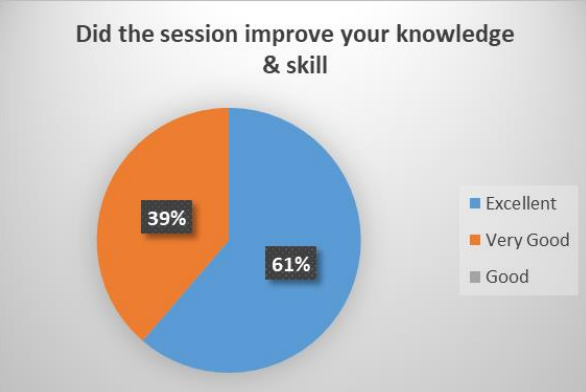
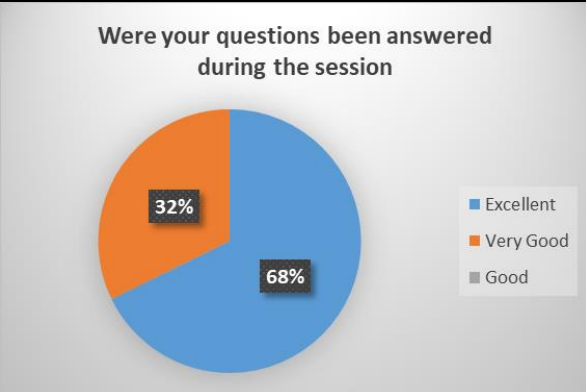
<p>Session II: "Introduction to Numpy and Pandas, Predictive Analysis, Linear Regression, Logistic Regression and Model Creation" Resource person: Mr. Sivaprasath, CEO, Jothna Software Pvt. Ltd., Chennai [Were your questions been answered during the session]</p>	 <p style="text-align: center;">Were your questions been answered during the session</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>69%</td> </tr> <tr> <td>Very Good</td> <td>25%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	69%	Very Good	25%	Good	6%	<p>94% of the participants agreed that their queries were answered by the experts during the session.</p>
Category	Percentage									
Excellent	69%									
Very Good	25%									
Good	6%									

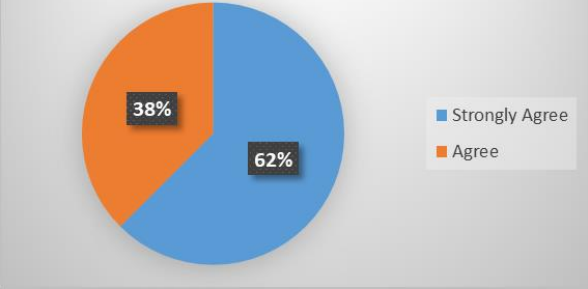
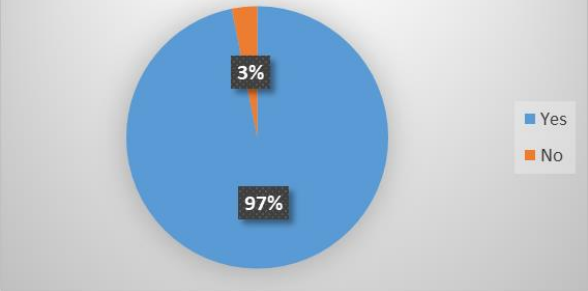
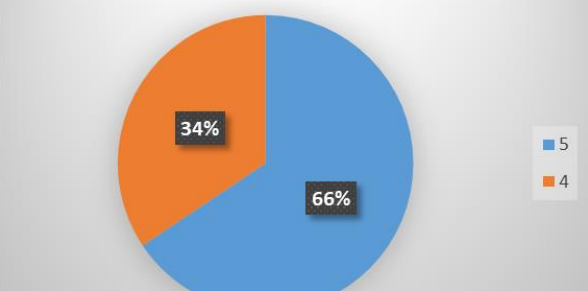
Day 4:

Feedback Points	Analysis	Inference								
<p>Session I: "Cyber Security Attacks Detection and Mitigation" Resource person: Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant. [Rate the session on the basis of content and speaker proficiency]</p>	 <p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>55%</td> </tr> <tr> <td>Very Good</td> <td>39%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	55%	Very Good	39%	Good	6%	<p>55% of the participants felt session was excellent and 39% felt it was very good. Almost 94% of the participants are very satisfied with this session.</p>
Category	Percentage									
Excellent	55%									
Very Good	39%									
Good	6%									
<p>Session I: "Cyber Security Attacks Detection and Mitigation" Resource person: Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant. [Did the session improve your knowledge & Skill]</p>	 <p style="text-align: center;">Did the session improve your knowledge & skill</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>45%</td> </tr> <tr> <td>Very Good</td> <td>52%</td> </tr> <tr> <td>Good</td> <td>3%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	45%	Very Good	52%	Good	3%	<p>The session was able to improve their knowledge and skill in an excellent way for 45% of the participants, and 52% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	45%									
Very Good	52%									
Good	3%									

<p>Session I: "Cyber Security Attacks Detection and Mitigation" Resource person: Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant. [Were your questions been answered during the session]</p>	<p style="text-align: center;">Were your questions been answered during the session</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>55%</td> </tr> <tr> <td>Very Good</td> <td>39%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	55%	Very Good	39%	Good	6%	<p>94% of the participants agreed that their queries were answered by the experts during the session.</p>
Category	Percentage									
Excellent	55%									
Very Good	39%									
Good	6%									
<p>Session II: "AI Powered Malware Analysis" Resource person: Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant. [Rate the session on the basis of content and speaker proficiency]</p>	<p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>55%</td> </tr> <tr> <td>Very Good</td> <td>39%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	55%	Very Good	39%	Good	6%	<p>55% of the participants felt session was excellent and 39% felt it was very good. Almost 94% of the participants are very satisfied with this session.</p>
Category	Percentage									
Excellent	55%									
Very Good	39%									
Good	6%									
<p>Session II: "AI Powered Malware Analysis" Resource person: Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant. [Did the session improve your knowledge & Skill]</p>	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>55%</td> </tr> <tr> <td>Very Good</td> <td>39%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	55%	Very Good	39%	Good	6%	<p>The session was able to improve their knowledge and skill in an excellent way for 55% of the participants, and 39% of the participants felt it was very good.</p>
Category	Percentage									
Excellent	55%									
Very Good	39%									
Good	6%									
<p>Session II: "AI Powered Malware Analysis" Resource person: Dr. S. Sibi Chakkaravarthy, Cyber Security Consultant. [Were your questions been answered during the session]</p>	<p style="text-align: center;">Were your questions been answered during the session</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>58%</td> </tr> <tr> <td>Very Good</td> <td>36%</td> </tr> <tr> <td>Good</td> <td>6%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	58%	Very Good	36%	Good	6%	<p>94% of the participants agreed that their queries were answered by the experts during the session.</p>
Category	Percentage									
Excellent	58%									
Very Good	36%									
Good	6%									

Day 5:

Feedback Points	Analysis	Inference								
Session I: Introduction to Blockchain Technology" Resource person: Mr. Arshad Sarfarz Ariff, Senior Technology Architect, Infosys Ltd. [Rate the session on the basis of content and speaker proficiency]	<p style="text-align: center;">Rate the session on the basis of content and speaker proficiency</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><th>Rating</th><th>Percentage</th></tr> <tr><td>Excellent</td><td>61%</td></tr> <tr><td>Very Good</td><td>39%</td></tr> <tr><td>Good</td><td>0%</td></tr> </table>	Rating	Percentage	Excellent	61%	Very Good	39%	Good	0%	61% of the participants felt session was excellent and 36% felt it was very good. 100% participants are very satisfied with the basis of content and speaker proficiency.
Rating	Percentage									
Excellent	61%									
Very Good	39%									
Good	0%									
Session I: Introduction to Blockchain Technology" Resource person: Mr. Arshad Sarfarz Ariff, Senior Technology Architect, Infosys Ltd. [Did the session improve your knowledge & Skill]	<p style="text-align: center;">Did the session improve your knowledge & skill</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><th>Rating</th><th>Percentage</th></tr> <tr><td>Excellent</td><td>61%</td></tr> <tr><td>Very Good</td><td>39%</td></tr> <tr><td>Good</td><td>0%</td></tr> </table>	Rating	Percentage	Excellent	61%	Very Good	39%	Good	0%	The session was able to improve their knowledge and skill in an excellent way for 61% of the participants, and 39% of the participants felt it was very good.
Rating	Percentage									
Excellent	61%									
Very Good	39%									
Good	0%									
Session I: Introduction to Blockchain Technology" Resource person: Mr. Arshad Sarfarz Ariff, Senior Technology Architect, Infosys Ltd. [Were your questions been answered during the session]	<p style="text-align: center;">Were your questions been answered during the session</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><th>Rating</th><th>Percentage</th></tr> <tr><td>Excellent</td><td>68%</td></tr> <tr><td>Very Good</td><td>32%</td></tr> <tr><td>Good</td><td>0%</td></tr> </table>	Rating	Percentage	Excellent	68%	Very Good	32%	Good	0%	100% of the participants agreed that their queries were answered by the experts during the session.
Rating	Percentage									
Excellent	68%									
Very Good	32%									
Good	0%									

<p>The content and clarity of the sessions were good</p>	<p style="text-align: center;">The content and clarity of the sessions were good</p>  <table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Strongly Agree</td> <td>62%</td> </tr> <tr> <td>Agree</td> <td>38%</td> </tr> </tbody> </table>	Response	Percentage	Strongly Agree	62%	Agree	38%	<p>62% participants strongly agreed that the content and the clarity of the sessions were good.</p>
Response	Percentage							
Strongly Agree	62%							
Agree	38%							
<p>Whether you refer the STTP to your friends and colleagues?</p>	<p style="text-align: center;">Whether you refer the STTP to your friends and colleagues?</p>  <table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>97%</td> </tr> <tr> <td>No</td> <td>3%</td> </tr> </tbody> </table>	Response	Percentage	Yes	97%	No	3%	<p>97% of the participants responded to give reference about STTP to their friends and colleagues</p>
Response	Percentage							
Yes	97%							
No	3%							
<p>Overall, how could you rate the STTP?</p>	<p style="text-align: center;">Overall, how could you rate the STTP?</p>  <table border="1"> <thead> <tr> <th>Rating</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>66%</td> </tr> <tr> <td>4</td> <td>34%</td> </tr> </tbody> </table>	Rating	Percentage	5	66%	4	34%	<p>66% of the participants given five star rating for STTP</p>
Rating	Percentage							
5	66%							
4	34%							
<p>Any additional comments regarding the sessions? Suggestions for improvement?</p>	<ul style="list-style-type: none"> • The training programme was designed properly. Contents were good.. • It is a good initiative. It was good overall -these need to evolve more...to industry 4.0.. always there should be some question what is today and what next • Wonderful resource persons. • Well arranged and coordinated. Thanks to all the team members.. • OVER ALL GOOD ARRANGEMENT. If possible arrange online marketing separate STTP. 							

	<ul style="list-style-type: none"> • Thanks Sir/Madam for organizing the STTP. It gave us exposure to various applications of artificial intelligence in the real world and also explained about various machine learning methods. We need more of such sessions, which is really helpful. • Very good topic always Chosen and Content of Each Presentation to be Shared. • Well going. Pl share contact details of resource person. will be helpful for our further research.
--	---

Annexure A

List of Participants:

S. No.	Name	Designation	Name of the Institute / Organization
1	Ms. Aarthi G	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
2	Ms. Aarthi R	Faculty	Dhanalakshmi Srinivasan Engineering College (Autonomous)
3	Ms. Aarti Sawant	Faculty	Bharati Vidyapeeth (Deemed to be University) College of Engineering, Pune
4	Mr. Ahmed Zeeshan	Student	B.S. Abdur Rahman Crescent Institute of Science and Technology
5	Mr. Anilsagar T	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
6	Mr. Arbaz Siddiqui	Student	B.S. Abdur Rahman Crescent Institute of Science and Technology
7	Mr. Aroga Victor Paul M	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
8	Ms. Aruna Arumugam G	Faculty	Anna University
9	Ms. Arunapriya R	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
10	Ms. Ashreetha S	Student	B.S. Abdur Rahman Crescent Institute of Science and Technology
11	Ms. Azka	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
12	Mr. B Muralikrishna	Faculty	PBR VITS, Kavali
13	Mr. Bhabani Sankar Ratha	Faculty	NIIS Institute of Business Administration
14	Mr. Boyella Mala Konda Reddy	Faculty	Shree Institute of Technical Education
15	Ms. Deepa V	Research Scholar	SRM University

S. No.	Name	Designation	Name of the Institute / Organization
16	Ms. Deepika.A	Student	B. S. Abdur Rahman Crescent Institute of Science and Technology
17	Mr. Dennise Mathew	Faculty	Chennai Institute of Technology
18	Dr. Feras Zen Alden	Faculty	Unitar International University
19	Mr. G Siva Krishna	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
20	Dr. Gopi Ramasamy	Faculty	Dhanalakshmi Srinivasan Engineering College
21	Ms. Ilakiya.k	Student	B. S. Abdur Rahman Crescent Institute of Science and Technology
22	Mr. Inzamam ul haq	Student	B.S Abdur Rahman Crescent Institute of Science and Technology
23	Ms. J. Dhanalakshmi	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
24	Dr. Lalitha T	Faculty	Jain University
25	Mr. Manimaran Mannaperumal	Research Scholar	Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology
26	Mr. Mohamed Ashraf K	Research Scholar	B. S. Abdur Rahman Crescent Institute of Science and Technology
27	Mr. Mohamed Fazil	Student	B.S. Abdur Rahman Crescent Institute of Science and Technology
28	Mr. Mohan Raj S	Student	B.S Abdur Rahman Crescent Institute of Science and Technology
29	Dr. R. Narayanan	Advisor	CWC Implementation Indian Chemical Council
30	Mr. Omar Musa	Faculty	Unitar International University
31	Mr. P M D Ali Khan	Faculty	S V College of Engineering
32	Dr. P.Sriramya	Faculty	Saveetha School of Engineering, SIMATS
33	Ms. Pooja Deshmukh	Faculty	Bharati Vidyapeeth Deemed to be University, College of Engineering, Pune
34	Dr. R. Leo	Faculty	SSN College of Engineering
35	Mr. Robert P	Faculty	Koneru Lakshmaiah Education Foundation
36	Ms. S R Sowmiya	Research Scholar	Dhanalakshmi Srinivasan Engineering College
37	Mr. S.Balasubramanian	Faculty	DDE, Alagappa University
38	Mr. S.Karthikeyan	Faculty	B.S. Abdur Rahman Crescent Institute of Science and Technology

S. No.	Name	Designation	Name of the Institute / Organization
39	Mr. Saravanan S	Research Scholar	Dhanalakshmi Srinivasan Engineering College
40	Mr. Shahith Khan E	Student	B.S. Abdur Rahman Crescent Institute of Science and Technology
41	Ms. Shiny Irene D	Faculty	SRM Institute of Science and Technology
42	Ms. Snehal C Mane	Faculty	Bharati Vidyapeeth (Deemed to be University) College of Engg, Pune
43	Mr. Sourav Sinha	Research Scholar	B.S. Abdur Rahman Crescent Institute of Science and Technology
44	Mr. Tony Prasanth	Student	B. S. Abdur Rahman Crescent Institute Of Science And Technology

Annexure B

Sample Participation Certificates:



Fig: Certificate of Mr. Omar Musa, Unitar International University



Fig: Certificate of Mr. Bhabani Sankar Ratha, NIIS Institute of Business Administration

Dr. Gufran Ahamad Ansari
Prof. / CA & Director (CSC)
Coordinator

Dr. S. Revathi
Prof. / CSE
Coordinator

Dr. N. Ayyanathan
Assoc. Prof. / CA
Coordinator

Dr. Venkatesan Selvam
Dean (SCIMS) & Convener