



SYMBIOSIS INSTITUTE OF COMPUTER STUDIES AND RESEARCH
SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

Established under section 3 of the UGC Act 1956,

Re- accredited by NAAC with 'A' Grade

Founder: Prof. Dr. S. B. Mujumdar, M.Sc., Ph.D. (Awarded Padma Bhushan and Padma Shri by President of India)

EVENT REPORT

- 1) **Topic/Title of the Event:** 6 days International eFDP on Applications of Machine Learning in Internet of Things(IoT) and Data Analytics
- 2) **Type of the Event** : Faculty Development Program
- 3) **Date(s) of the Event** : 19th June 2023 to 26th June 2023
- 4) **Time/Duration/Period** : 10.00 AM to 12.00 PM and 2.00 PM to 4.00 PM (4 hours, 6days)
- 5) **Venue** : Online mode -
https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZTk2ZTYyZDQtOTEzYi00YmY4LWF1OTAtMzgwZGNiNjVhMTk1%40thread.v2/0?context=%7b%22Tid%22%3a%225585330f-9739-4fc3-9558-6526f2590536%22%2c%22Oid%22%3a%22db2037dd-a8d7-4d70-8d2a-6b4e347bb59f%22%7d
- 6) **Date of Submission of Report** : 05/07/2023
- 7) **Name of Event Co-coordinator(s) and Team Member(s)** : Dr. Madhuri Rao & Dr. Sumegh Tharewal
- 8) **Name(s) of Organization(s) & Brief Profile(s) of Guest(s)/Speaker(s)/Resource Person(s):**

There were 12 Guest Speakers whose details are as follows-

Sl.No	Speaker Name & Affiliation
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1	Dr. Abdul Aleem [PhD MNIT A Associate Professor, SCSE, Galgotias University
2	Dr. Rourab Paul [Post Doc IIT Kanpur, Ph. D University of Calcutta] Associate Professor and Post-Doctoral Research Fellow at University of Pisa, Egypt
3	Dr. Nimisha Ghosh[Ph.D NISER], Associate Professor @ SOADU, Bhubaneswar & Post Doctoral Fellow at CNR Rome, Former ERCIM PostDoctoral fellow at University of Warsaw, Poland
4	Dr. Saugat Bhattacharya, Lecturer in Computer Science, School of Computer Science, Faculty of Computing, Ulster University, United Kingdom
5	Dr. Satosh Kumar Sahu [Ph.D from NIT Rourkela, M.Tech NIT Rourkela] , Senior Programming Officer, ONGC
6	Dr. Hemaraju Pollayi [Ph.D IISC, Post Doc- Ohio State University], Associate Professor, Department of Civil Engineering, School of Technology, GITAM University Hyderabad
7	Dr. Jitesh Pradhan [Ph.D ISM Dhanbad, M.Tech ISM Dhanbad] Assistant Professor, National Institute of Technology, Jamshedpur
8	Dr. Tomothy Malche [Ph.D, RTUB , MP], Assistant Professor, Manipal University, Jaipur, Rajasthan
9	Dr. Brijendra Pratap Singh [Ph.D NIT Kurukshetra], Associate Professor, School of Computer Science, Bennet University, Noida
10	Dr. Manas Ranjan Prusty [Ph.D IGCAR Kaplakkam], Associate Professor, Vellore Institute of Technology, Chennai
11	Dr. Gururaj Mukarambi, Asst.Professor of Computer Science @ School of Computer Science, Central University of Karnataka
12	Dr. Jasminder Kaur Sandhu [Ph.D Thapar University] , Associate Professor and Ph.D Coordinator, Chandigarh University, Patiala

9) No. of Participants: SICSR Student	2	SICSR Staff	18
SIU Staff	49	SIU Students	0
Others	21	Total	90

10) Associates/Sponsors/Partners (ACM/IEEE/SIU/WiMLDS/etc.): N.A

11) Details (remarks, beneficiaries, etc.):

The 6 days International e-FDP on “Applications of Machine Learning in Internet of Things and Data Analytics” was held from 19th June 2023 to 26th June 2023. It comprised of 12 sessions that were delivered by eminent speakers from premier institute of national and international repute. More than 90 Participants registered for the program. The participants gained knowledge on how real world problems could be addressed using Machine Learning and Deep Learning approaches. Latest tools such as Orange, TinyML, R were discussed and their efficient use was demonstrated by the speakers. Open Research oriented problems that need to be addressed in Internet of Things and data analytics with the help of ML and transfer learning were discussed. Various ML algorithms such regression, SVM, KNN, Naïve Bayes, Time Series Forecasting, etc and their implementation in solving complex real life problems were also explained briefly. The titles of the talks session wise are –

1. Session 1 – Data Analytics to Machine Learning
2. Session 2- Machine learning in Blockchain based Smart City
3. Session 3- Application of machine learning/Deep learning in computational biology
4. Session 4- Introduction to Predictive Coding
5. Session 5- Applied Machine Learning through Visual Programming
6. Session 6- IoT and AI/ML based Intelligent Systems for Real-Time Structural Applications in Civil Engineering
7. Session 7- Application of Deep Transfer Learning for Skin Lesion Detection.
8. Session 8- Harnessing the Power of IoT and TinyML for Intelligent Edge Computing and

Real-time Decision making

9. Session 9- Applications of Machine Learning in Cyber Security Data Analysis
10. Session 10- Deep Learning for Disease Classification
11. Session 11- Addressing Challenges in Digital Image Processing with machine Learning techniques
12. Session 12- Machine Learning for Real-World Problems

The Detailed Brochure, Time Table, certificate, Video Link and Photographs are provided below.

12) **Submitted By:** Dr. Madhuri Rao

13) **Check List (as applicable and to be attached with email, preferably in pdf format)**

Video/Photos with caption



Email Communication of Approvals and Sanctions



Attendance Sheet of Participants (with their signature)



Summary of Feedback Form



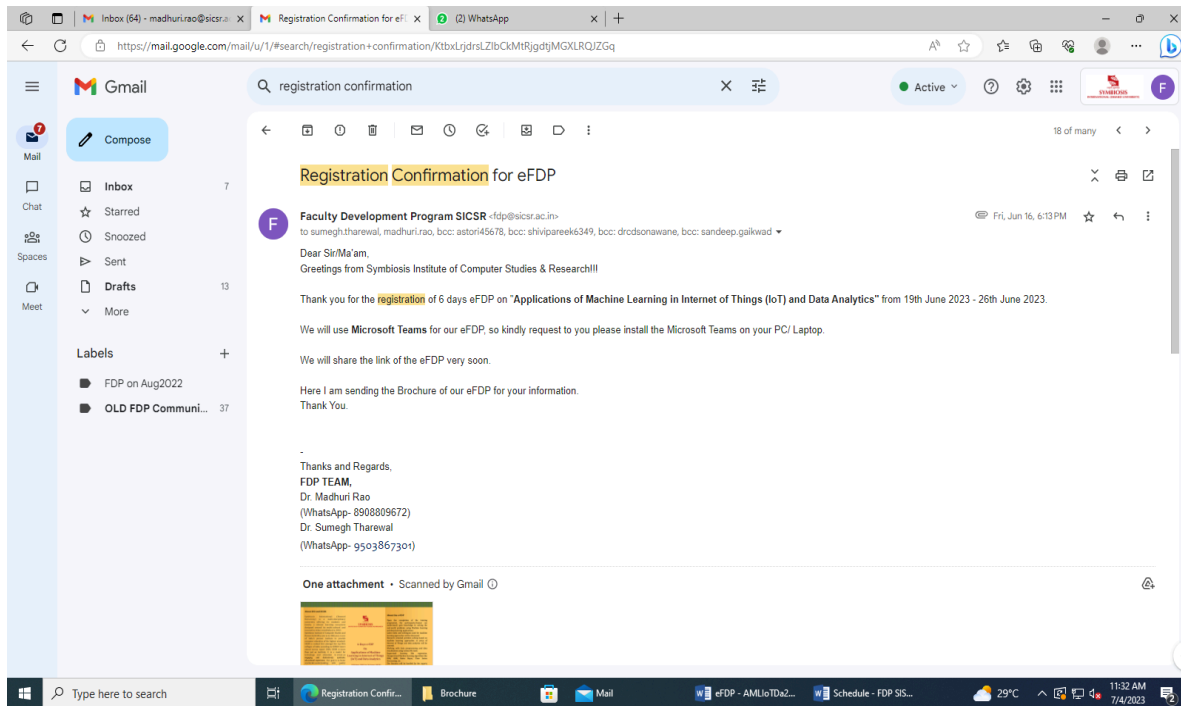
Scanned Copy (in single pdf file) of at least 5 Feedback Forms



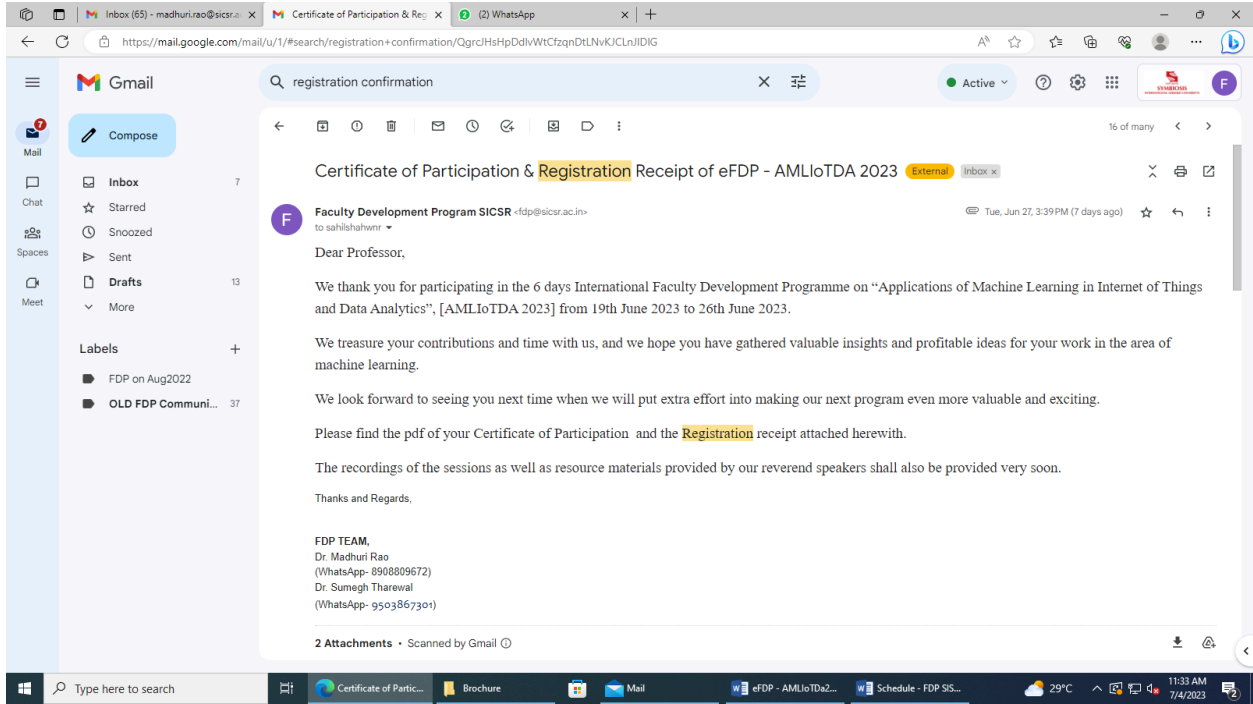
Certificate to Guest Speaker / Participant Sample



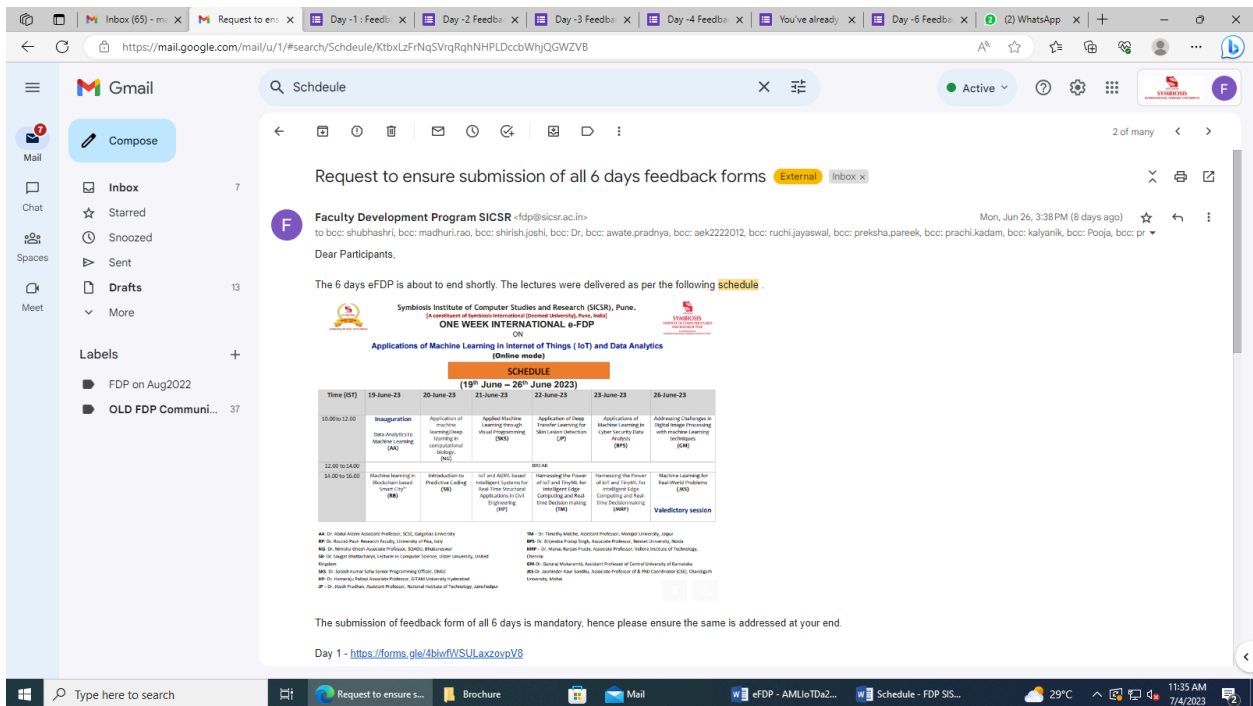
e-mail -Communication



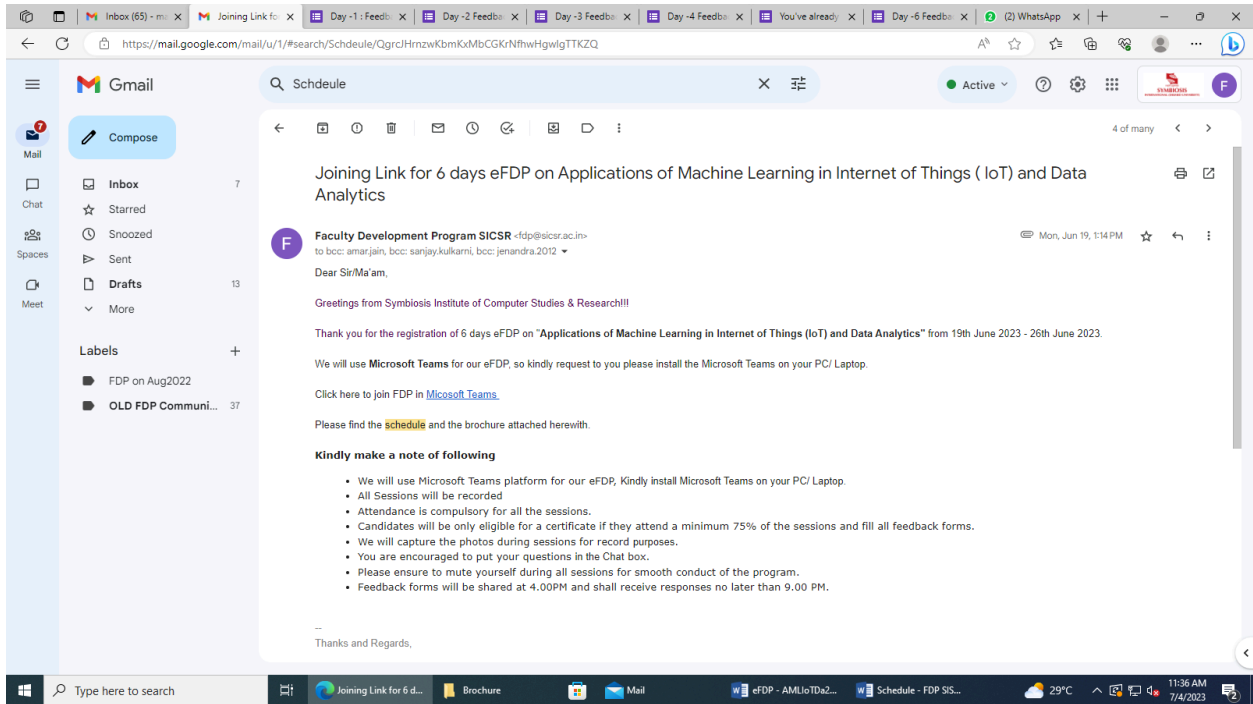
Sample of Registration Confirmation email to Participants



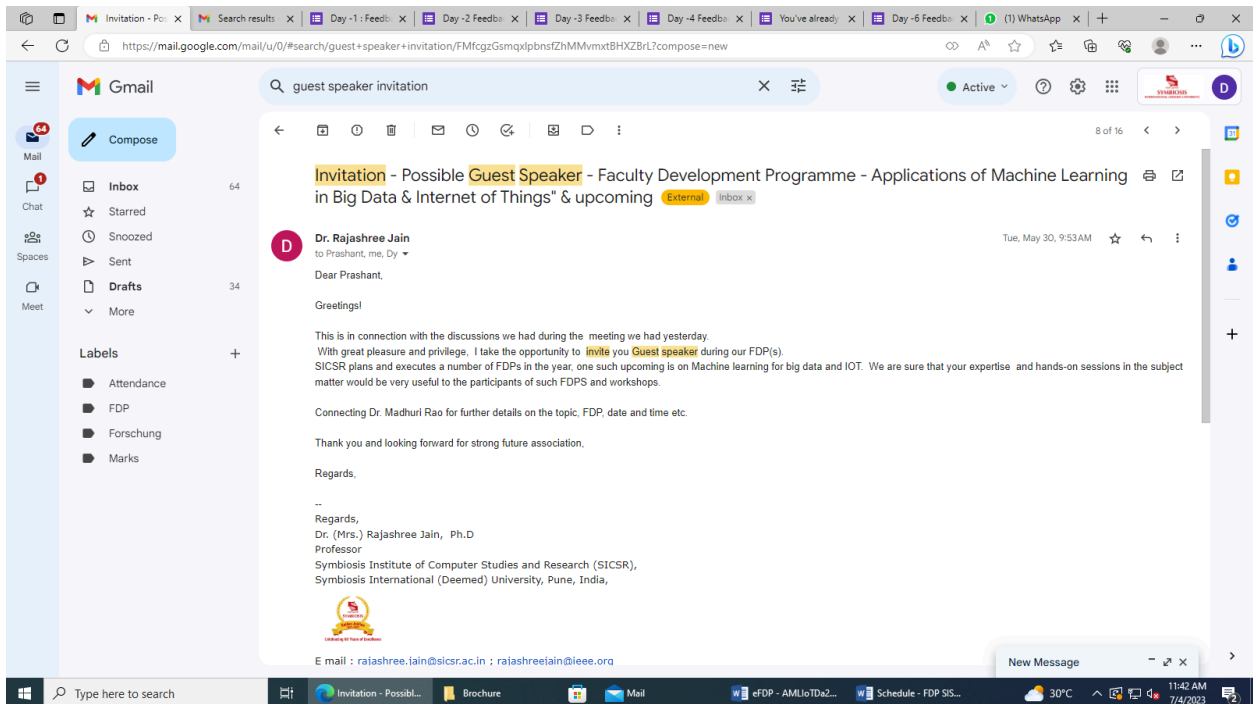
Sample of Certificate of Participation and Payment Receipt to Participants



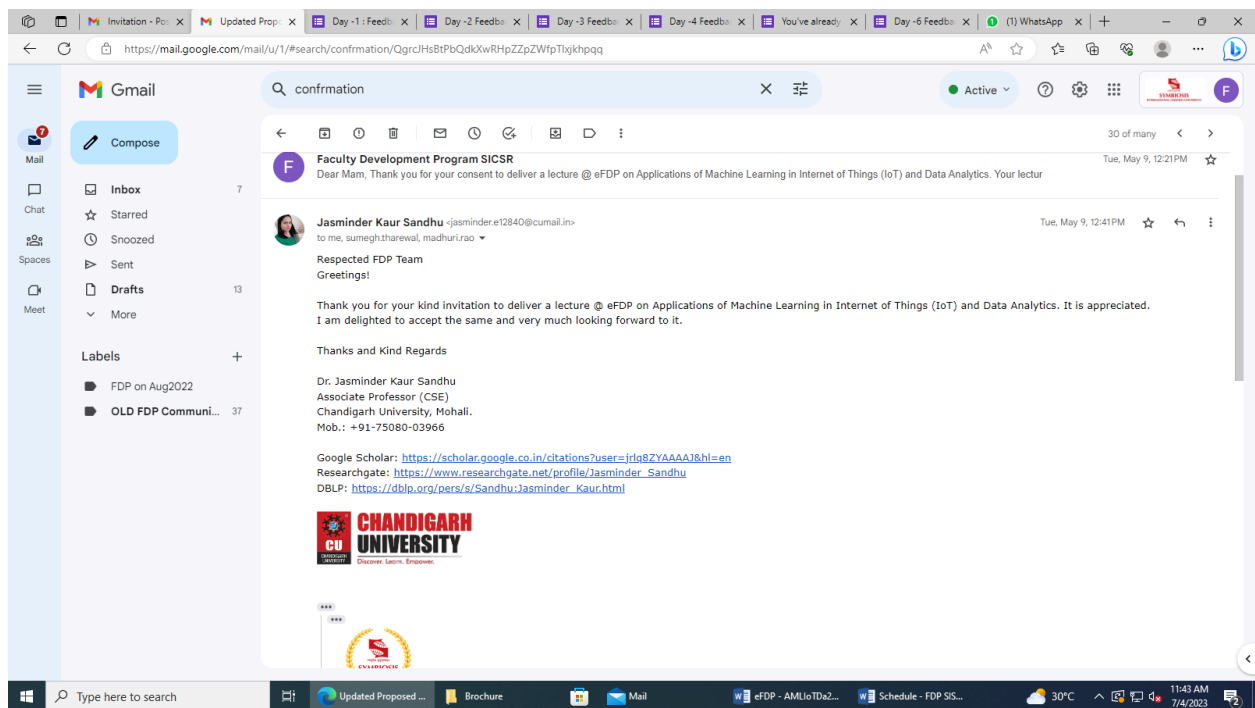
Sample email for Feedback form Submission



Sample email for providing Joining Link to participants



Sample mail – Guest Speaker Invitation



Sample mail – acceptance to be a guest Speaker at eFDP-AMLIoTDA2023

Photographs:

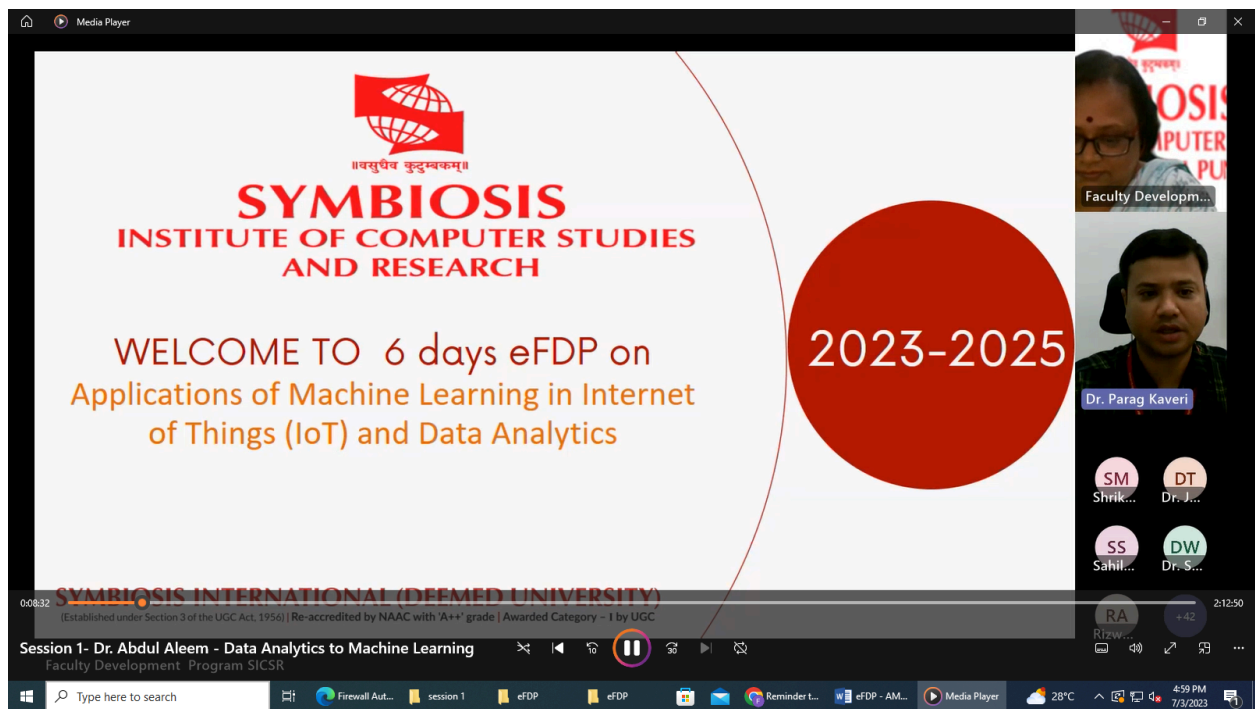


Fig 1: Inauguration Ceremony held at 10.00 AM on 19th June 2023 in online mode

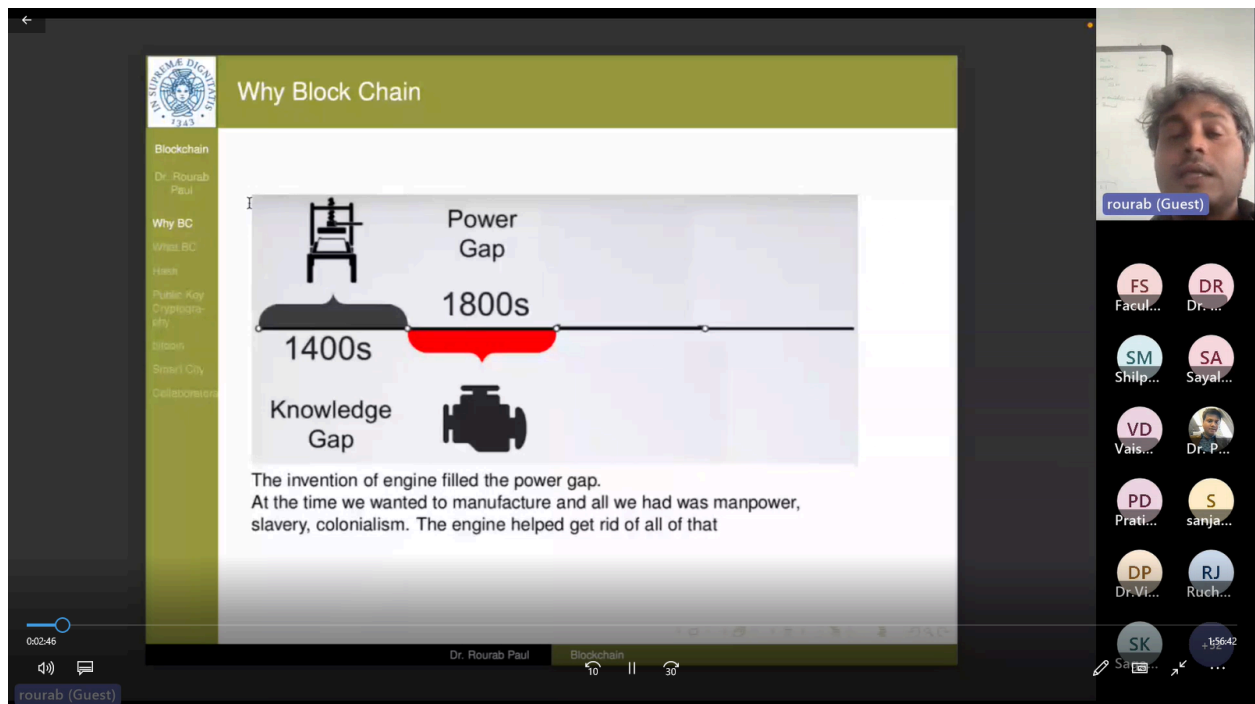


Fig 2: Session 2 by Dr. Rourab Paul held on 19th June 2023, 2.00PM – 4.00 PM in online mode.

Ulster University

Predictive Coding

Original images

Novel images but familiar object classes

Reconstructions from representations in areas

Latent representations (y_1) θ_1 Latent representations (y_2) θ_2 Latent representations (y_3) θ_3 Latent representations (y_4) θ_4 \hat{x}

Generative pathway

Deep Gated Hebbian Predictive Coding Accounts for Emergence of Complex Neural Response Properties Along the Visual Cortical Hierarchy, Dora et al, 2021

09:01

Bhattacharyya, Saugat

Fig 3: Session 4 by Dr. S. Bhattacharyya held on 20th June 2023, 2.00 PM -4.00 Pm in online mode

SYMBIOSIS INSTITUTE OF COMPUTER STUDIES AND RESEARCH, PUNE

GITAM UNIVERSITY

IoT and AI/ML based Intelligent Systems for Real-Time Structural Applications in Civil Engineering

Truck

Bridge Deck

Sensors

Prestressed Concrete Girder

3.3m 3.3m 3.3m 1.6m 1.1m

Artificial Intelligence AI/ML Modeling Laboratory

RADAR Antenna

Dr. Hemaraju Pollayi
(Dr.) Praveena Rao
Associate Professor
Department of Civil Engineering
GITAM University
Hyderabad-502329, TS, India

21.06.2023 | 14:00-16:00

International e-FDP

Dr. HEMARAJU POLLAYI

Fig 4: Session 6 by Dr. H. Pollayi held on 21st June 2023, 2.00 PM - 4.00 PM in online mode

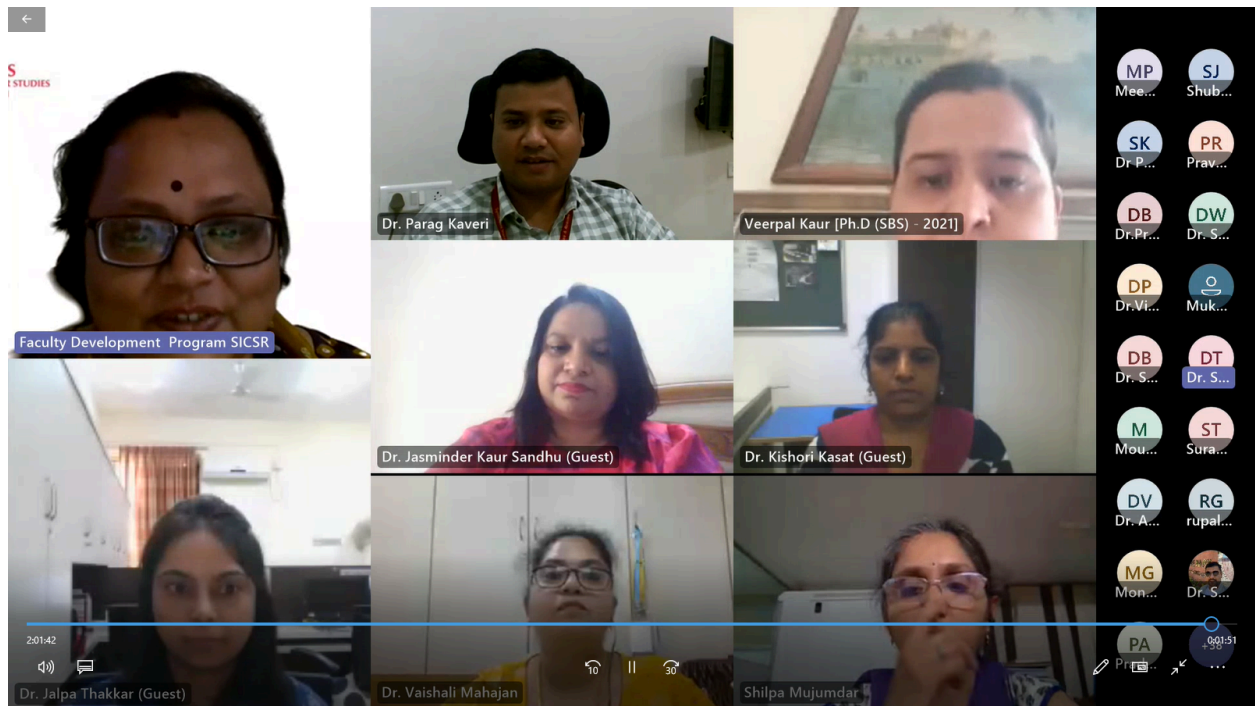


Figure 5: Valedictory Function held on 26th June 2023 at 3.45 PM in online mode.

Attendance:

Full Name	User Action	Timestamp
Faculty Development Program SICSR	Joined	6/19/23, 1:55:41 PM
Kalyani Kadam	Joined	6/19/23, 1:55:41 PM
Shilpa Mujumdar	Joined	6/19/23, 1:55:41 PM
sanjay.kulkarni	Joined	6/19/23, 1:55:41 PM
Ashish Dhoke	Joined	6/19/23, 1:55:41 PM
Rushikesh Kulkarni	Joined	6/19/23, 1:55:41 PM
Dr. Sachin A. Naik	Joined	6/19/23, 1:55:41 PM
Shirish Joshi	Joined	6/19/23, 1:55:41 PM
Prof. Apurva P Keskar (Guest)	Joined	6/19/23, 1:55:41 PM
Guest	Joined	6/19/23, 1:55:41 PM
Guest	Left	6/19/23, 1:55:47 PM
Dr. Raghupathy Anchala, SIHS (Guest)	Joined	6/19/23, 1:55:41 PM
Arpita Gurbasani (Guest)	Joined	6/19/23, 1:55:41 PM
Prof. Dipak Kadwe (Guest)	Joined	6/19/23, 1:55:41 PM
Kumari Deepika (Guest)	Joined	6/19/23, 1:55:41 PM
Smriti Pathak (Guest)	Joined	6/19/23, 1:55:41 PM
Preksha Pareek (Guest)	Joined	6/19/23, 1:55:41 PM
Dr. Jalpa Thakkar (Guest)	Joined	6/19/23, 1:55:41 PM
Dr. Latika Pinjarkar (Guest)	Joined	6/19/23, 1:55:41 PM
Rupali Gangarde (Guest)	Joined	6/19/23, 1:55:41 PM
Prof. Dr. Jatinderkumar R. Saini (Guest)	Joined	6/19/23, 1:55:41 PM
Prachi Kadam (Guest)	Joined	6/19/23, 1:55:41 PM
Ruchi Jayaswal	Joined	6/19/23, 1:55:41 PM
Nandhini k	Joined	6/19/23, 1:55:41 PM
Dr. Parag Kaveri	Joined	6/19/23, 1:55:41 PM
Vaishnavi Dabir	Joined	6/19/23, 1:55:41 PM
Mugdha Kshirsagar	Joined	6/19/23, 1:55:41 PM
Sagar Kolekar	Joined	6/19/23, 1:55:41 PM
Shubham Joshi	Joined	6/19/23, 1:55:41 PM

Session 1 Attendance – 19th June 2023

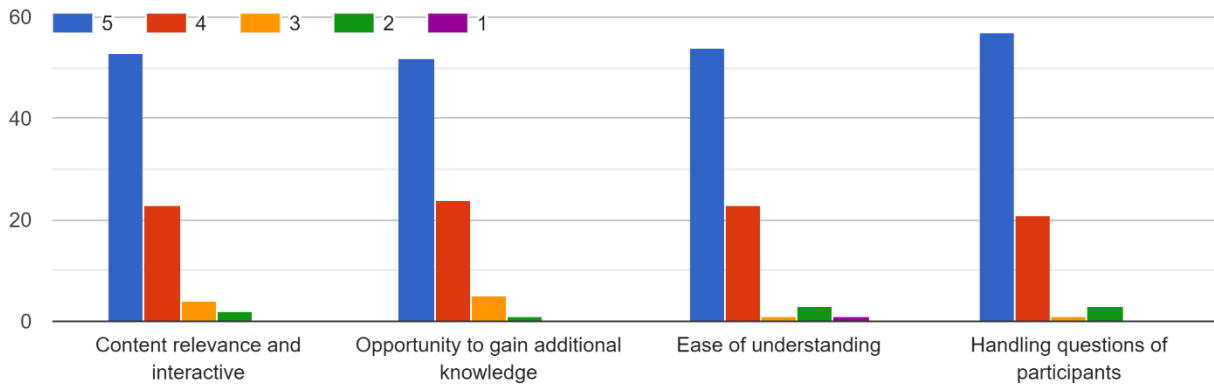
Full Name	User Action	Timestamp
Faculty Development Program SICSR	Joined	6/20/23, 9:28:55 AM
Rushikesh Kulkarni (Guest)	Joined	6/20/23, 9:28:57 AM
Jayshree Pande	Joined	6/20/23, 9:29:08 AM
Jayshree Pande	Left	6/20/23, 9:45:44 AM
Nilesh (Guest)	Joined	6/20/23, 9:32:03 AM
Nilesh (Guest)	Left	6/20/23, 9:32:33 AM
Nilesh (Guest)	Joined	6/20/23, 9:57:24 AM
Shirish Joshi	Joined	6/20/23, 9:33:39 AM
Mugdha Kshirsagar	Joined	6/20/23, 9:34:22 AM
Dr. Bikramaditya Ghosh (Guest)	Joined	6/20/23, 9:36:10 AM
Varsha Atul Shukre (Guest)	Joined	6/20/23, 9:40:30 AM
Dr. Vaishali Mahajan	Joined	6/20/23, 9:40:55 AM
Guest	Joined	6/20/23, 9:41:09 AM
Guest	Left	6/20/23, 9:41:16 AM
Dr. Smita Wagholikar (Guest)	Joined	6/20/23, 9:42:41 AM
Mousumi.Bharja	Joined	6/20/23, 9:43:45 AM
rupali gangarde	Joined	6/20/23, 9:45:18 AM
Aparna Sharma (Guest)	Joined	6/20/23, 9:46:26 AM
Dr. Snehal Bhosale (Guest)	Joined	6/20/23, 9:47:07 AM
Rizwan Ahmed (Guest)	Joined	6/20/23, 9:47:56 AM
Dr. Sumegh Tharewal (Guest)	Joined	6/20/23, 9:50:27 AM
Dr Binod Kumar (Guest)	Joined	6/20/23, 9:51:33 AM
Vaishnavi Dabir	Joined	6/20/23, 9:51:37 AM
K V Kumar (Guest)	Joined	6/20/23, 9:52:02 AM
Surabhi Thatte	Joined	6/20/23, 9:52:43 AM
Smriti Pathak (Guest)	Joined	6/20/23, 9:52:52 AM
Nimisha (Guest)	Joined	6/20/23, 9:52:57 AM
Student_Kabeer Notwani	Joined	6/20/23, 9:53:44 AM
Student_Kabeer Notwani	Left	6/20/23, 9:54:37 AM

Session 2 Attendance – 19th June 2023

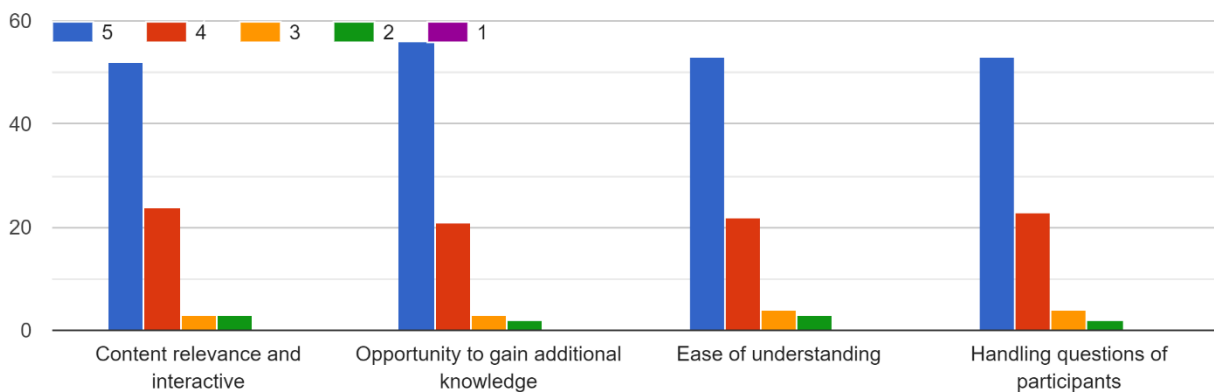
Summary of Feedback Forms



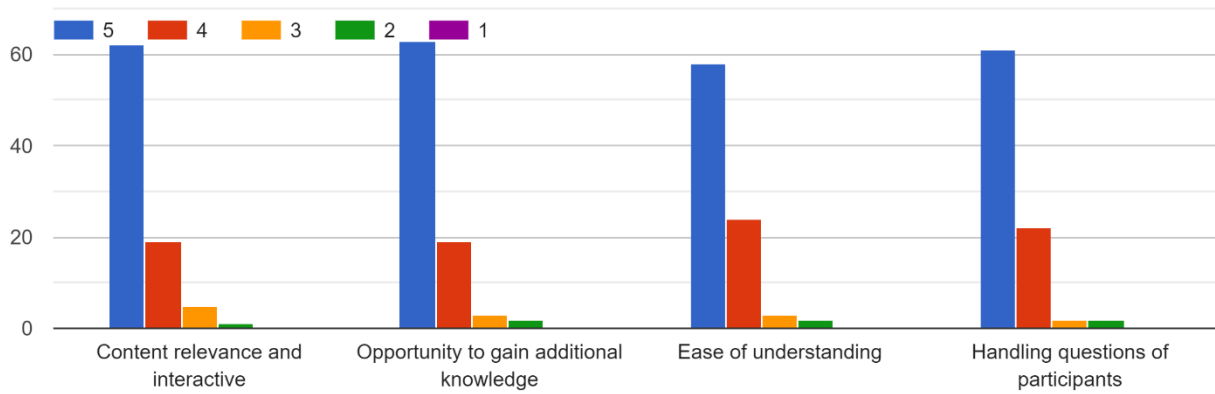
Rate the Session-I (Dr. Abdul Aleem - Analytics to Machine Learning) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



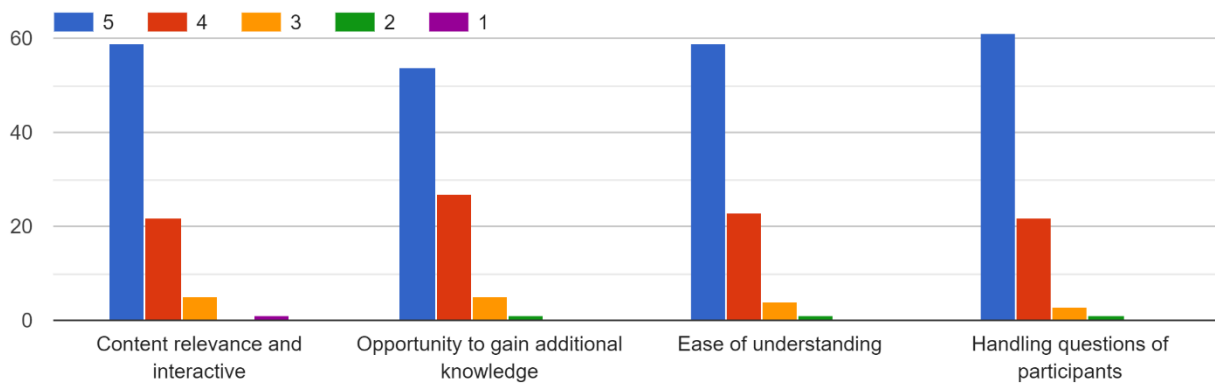
Rate the Session-2 (Dr. Rourab Paul - Machine learning in Blockchain based Smart City) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



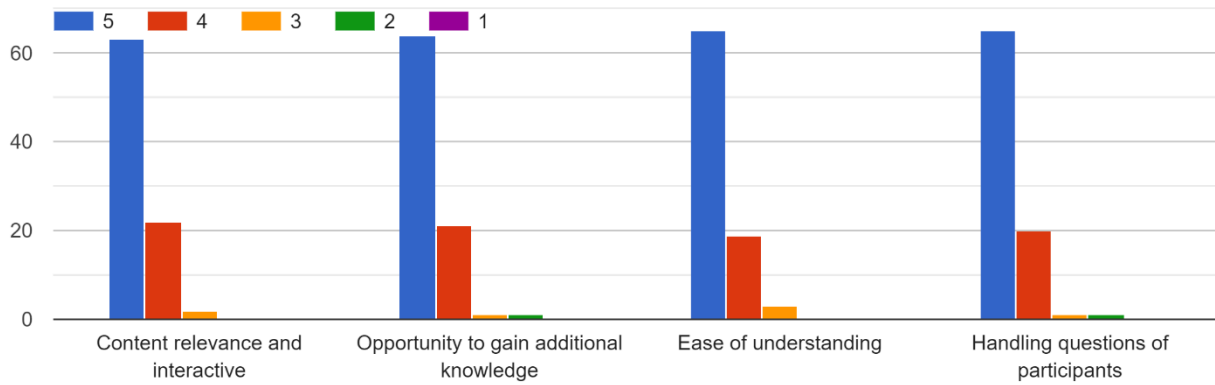
Rate the Session-3 (Dr. Nimisha Ghosh- Application of Machine Learning/Deep Learning in Computational Biology) on the scale of 5 to 1: Exc...Good (4), Average (3), Below Average (2), Poor (1)



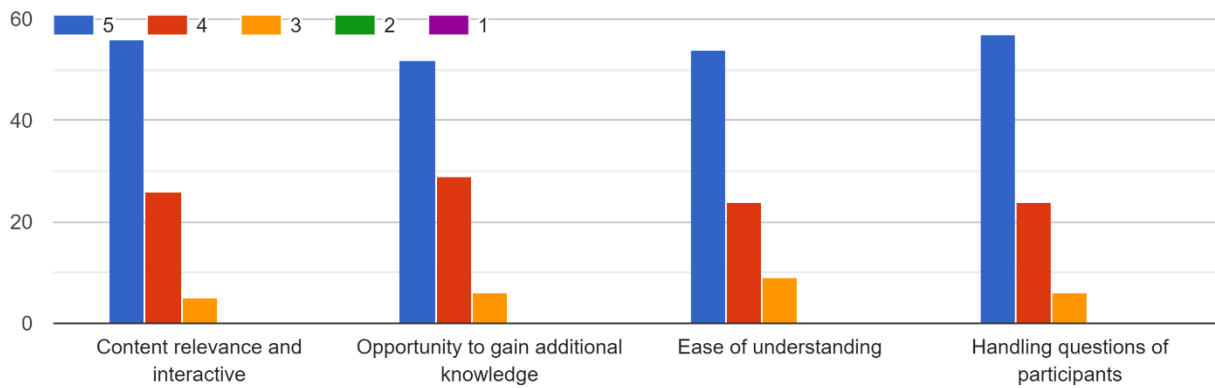
Rate the Session-4 (Dr. Saugat Bhattacharya - Introduction to Predictive Coding) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



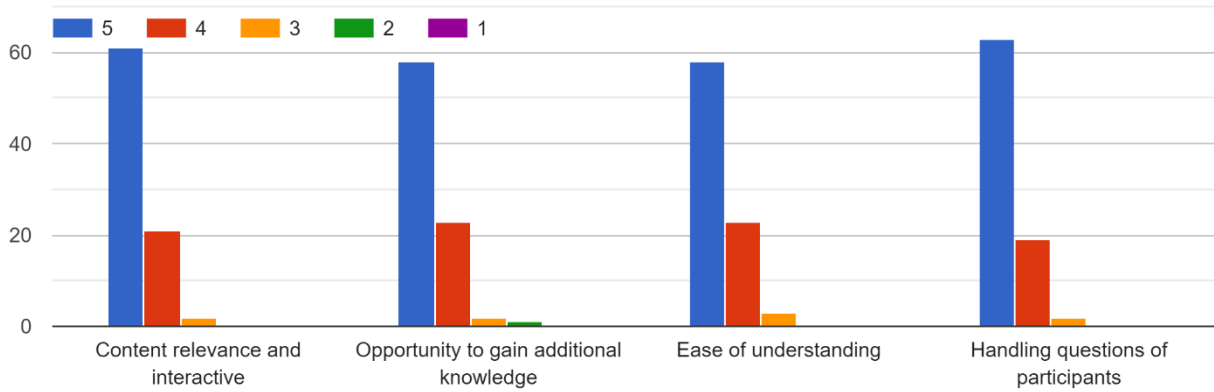
Rate the Session-5 (Dr. Satosh Kumar Sahu - Applied Machine Learning through Visual Programming) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



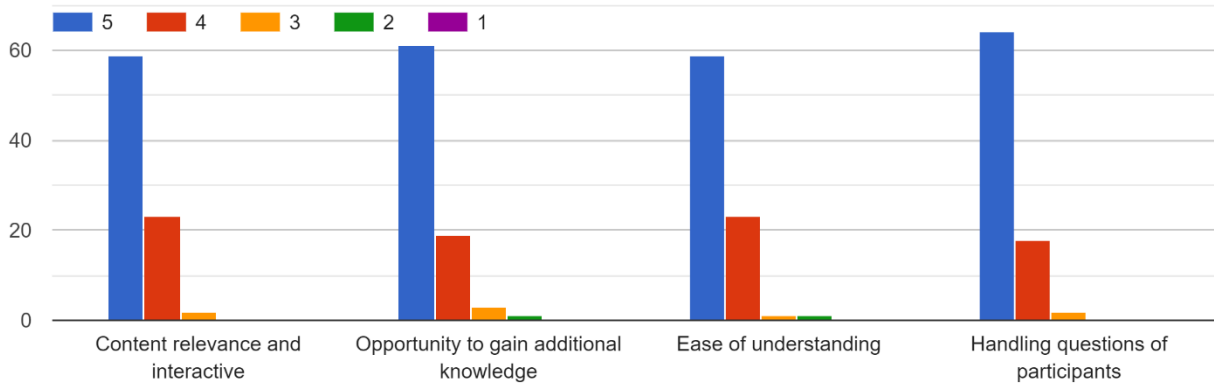
Rate the Session-6 (Dr. Hemaraju Pollayi - IoT and AI/ML based Intelligent Systems for Real-Time Structural Applications in Civil Engineering) on t..., Good (4), Average (3), Below Average (2), Poor (1)



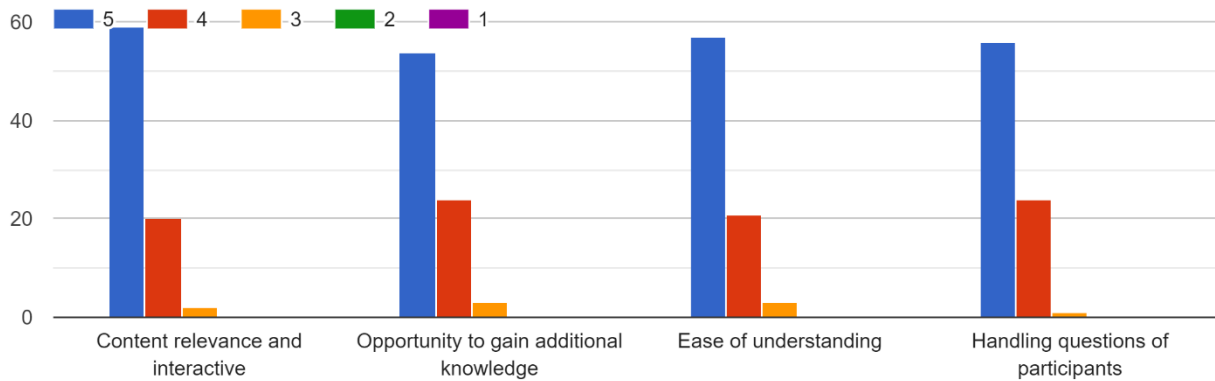
Rate the Session-7 (Dr. Jitesh Pradhan - Application of Deep Transfer Learning for Skin Lesion Detection) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



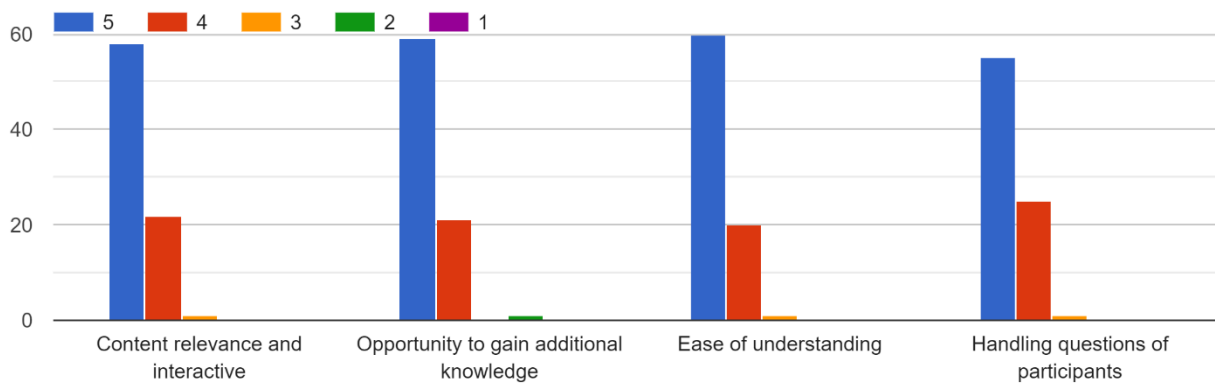
Rate the Session-8 (Dr. Timothy Malche - Harnessing the Power of IoT and TinyML for Intelligent Edge Computing and Real-time Decision making) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



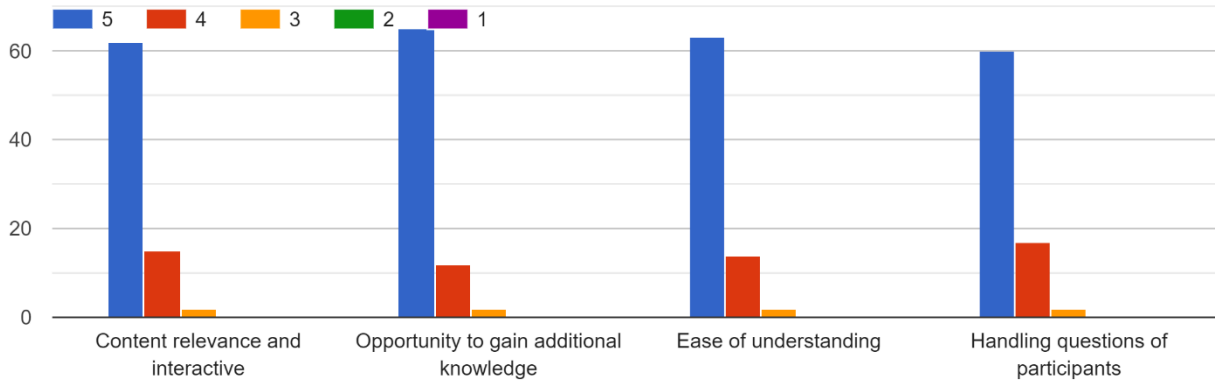
Rate the Session-9 (Dr. Brijendra Pratap Singh - Applications of Machine Learning in Cyber Security Data Analysis) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



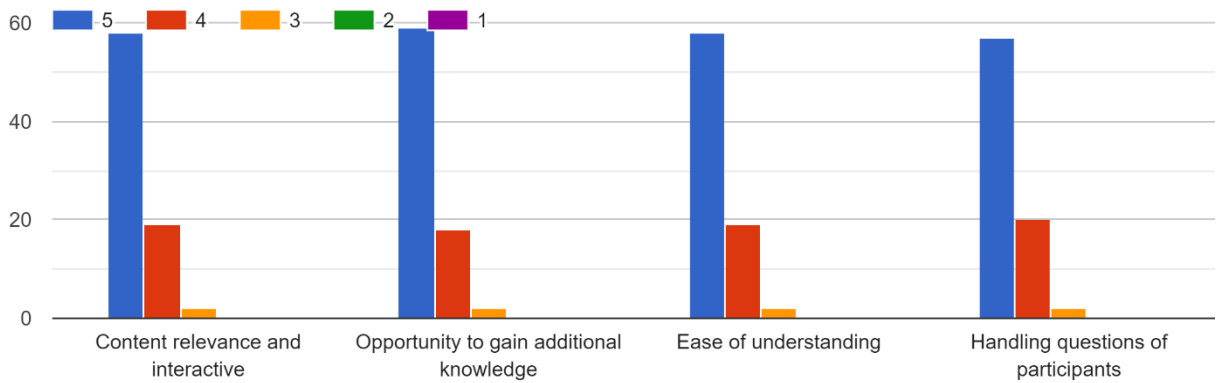
Rate the Session-10 (Dr. Manas Ranjan Prusty- Image Processing based Deep Learning Models for Disease Classification) on the scale of 5 to 1: Exc... Good (4), Average (3), Below Average (2), Poor (1)



Rate the Session-11 (Dr. Gururaj Mukarambi - Addressing Challenges in Digital Image Processing with machine learning techniques) on the scale of ...Good (4), Average (3), Below Average (2), Poor (1)



Rate the Session-12 (Dr. Jasminder Kaur Sandhu - Machine Learning for Real-World Problems) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)



Sample Feedback Form

Day -6 Feedback Form (SICSR) eFDP 19th June 2023 - 26th June 2023 (Responses)

Timestamp	Full Name (as required in Email ID)	Email ID	Rate the Session-11 (D)	Rate the Session-11 (D)	Rate the Session-11 (D)	Rate the Session-11 (D)	Rate the Session-12 (D)	Rate the Session-12 (D)	Rate the Session-12 (D)	Rate the Session-12 (D)
6/26/2023 15:27:54	Swapnil Purushottamrao	swapnil.goje@gmail.com	5	5	5	5	5	5	5	5
6/26/2023 15:27:56	Dr P ASHOK	ashokp2k4@gmail.com	5	5	5	5	5	5	5	5
6/26/2023 15:27:59	Dr. Sachin A. Naik	sachin.naik@sicsr.ac.in	4	4	4	4	5	5	4	4
6/26/2023 15:28:31	Dr. Bikramaditya Ghosh	b.ghosh@sibm.edu.in	3	3	3	3	5	4	5	5
6/26/2023 15:28:46	Dr. Snehal Bhosale	snehal.bhosale@sitpune	5	5	5	5	5	5	5	5
6/26/2023 15:28:48	Dr. Mousumi Bhanja	mousumi.bhanja@sitpun	5	5	5	5	5	5	5	5
6/26/2023 15:28:50	preksha pareek	preksha.pareek@sitpune	5	5	5	5	5	5	5	5
6/26/2023 15:29:01	monica kunte	monica_kunte@scmhrid	5	5	5	5	5	5	5	5
6/26/2023 15:30:41	Dr Latika Pinjarkar	latika.pinjarkar@sitnagpu	5	5	5	5	5	5	5	5
6/26/2023 15:30:59	Dr. Amol Dattatraya Vibh	amol.vibhute@sicsr.ac.in	5	5	5	5	5	5	5	5
6/26/2023 15:31:40	Dr. Sumegh Shrikant Th	sumegh.tharewal@sicsr.	5	5	5	5	5	5	5	5
6/26/2023 15:32:10	Veerpai Kaur	astori45678@gmail.com	5	5	5	5	5	5	5	5
6/26/2023 15:33:13	Prof. Apurva P Keskar	apurvakeskar1@gmail.co	5	4	5	5	5	5	5	5
6/26/2023 15:33:58	Rushikesh Prakash Kulk	rushikeshk@sitpune.edu.	4	5	5	5	4	5	5	5
6/26/2023 15:34:16	Kulamala Vinod Kumar	kvinod2208@gmail.com	5	5	5	5	5	5	5	5
6/26/2023 15:34:49	Dr Kalyani Dhananjay Ka	kaikalyani@sitpune.edu.in	5	5	4	4	5	5	4	4
6/26/2023 15:36:07	Dr Vaishali Mahajan	vaishali_mahajan@scmh	5	5	5	5	5	5	5	5
6/26/2023 15:36:15	Dr Deepali Prakash Sury	ao@sicsr.ac.in	5	4	4	4	4	5	5	5
6/26/2023 15:36:30	Rizwan Ahmed Ansari	rizwan.ansari@sitpune.e	3	3	3	3	3	3	3	3
6/26/2023 15:36:53	Dr. Priya Jadhav	priya.jadhav@sitpune.ed	5	5	5	4	4	5	5	5
6/26/2023 15:40:28	Dr. K. Nandhini	nandhini.k@sitpune.edu.	5	5	5	4	4	5	4	5
6/26/2023 15:40:39	Dr. Sandeep Vasant Gaik	sandeep.gaikwad@sicsr.	5	5	5	5	5	5	5	5
6/26/2023 15:43:57	Dr. Jalpa Thakkar	jalpa.thakkar@scmspune	5	5	4	5	5	5	5	5
6/26/2023 15:45:42	Dr Pooja Kamat	pooja.kamat@sitpune.ed	5	5	5	5	5	5	5	5
6/26/2023 15:45:54	Vinaykumar S Jatti	vinay.jatti@sitpune.edu.ir	5	5	5	5	5	5	5	5
6/26/2023 15:46:01	Sahil Kailas shah	sahilshahwtr@gmail.com	4	4	5	5	5	4	4	4

Day -6 Feedback Form (SICSR) eFDP 19th June 2023 - 26th June 2023

Questions Responses 79 Settings

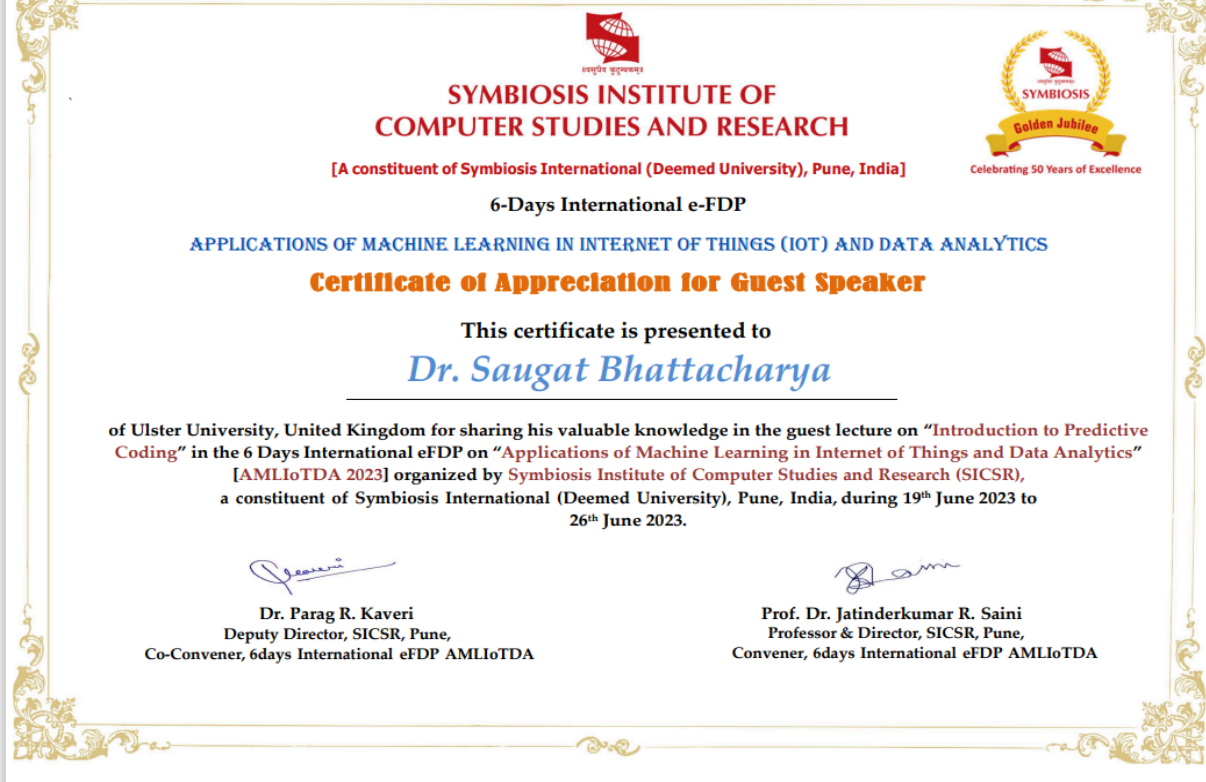
Rate the Session-11 (Dr. Gururaj Mukarambi - Addressing Challenges in Digital Image Processing with machine learning techniques) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)

	5	4	3	2	1
Content releva...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to ...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of unders...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Handling quest...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the Session-12 (Dr. Jasminder Kaur Sandhu - Machine Learning for Real-World Problems) on the scale of 5 to 1: Excellent (5), Good (4), Average (3), Below Average (2), Poor (1)

	5	4	3	2	1
Content releva...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Certificate of Appreciation



SYMBIOSIS INSTITUTE OF COMPUTER STUDIES AND RESEARCH

[A constituent of Symbiosis International (Deemed University), Pune, India]



6-Days International e-FDP

APPLICATIONS OF MACHINE LEARNING IN INTERNET OF THINGS (IOT) AND DATA ANALYTICS

Certificate of Appreciation for Guest Speaker

This certificate is presented to

Dr. Saugat Bhattacharya

of Ulster University, United Kingdom for sharing his valuable knowledge in the guest lecture on "Introduction to Predictive Coding" in the 6 Days International eFDP on "Applications of Machine Learning in Internet of Things and Data Analytics" [AMLIoTDA 2023] organized by Symbiosis Institute of Computer Studies and Research (SICSR), a constituent of Symbiosis International (Deemed University), Pune, India, during 19th June 2023 to 26th June 2023.

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Certificate of Participation