MANIPAL UNIVERSITY
JAIPUR

FACULTY OF ENGINEERING

SCHOOL OF COMPUTER SCIENCE & ENGINEERING

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

"IBM QUANTUM QISKIT TOOL HANDS-ON"

Type of Event – Expert Talk

Date of Event – 19/04/2023

MANIPAL UNIVERSITY
JAIPUR

Content of Report (index)

1. Introduction of the Event

The IBM Quantum Qiskit Tool Hands-On event is a expert talk focused on introducing participants to the basics of quantum computing using the Qiskit open source software development kit (SDK). Hosted by V Jayakumar, the event is designed to provide attendees with a hands-on learning experience, giving them the opportunity to explore the fundamental concepts of quantum computing and how they can be implemented using Qiskit. The event will cover topics such as quantum circuits, quantum gates, quantum algorithms, and quantum basic. Participants will also have the chance to work with IBM's cloud-based quantum computing platform, IBM Quantum Experience, and to learn how to use Qiskit to write and run their own quantum programs. The event is aimed at anyone with an interest in quantum computing, from beginners to those with some prior experience in the field.

2. Objective of the Event

The main objective of the IBM Quantum Qiskit Tool Hands-On event is to provide participants with a practical understanding of the fundamental concepts of quantum computing using the Qiskit SDK. The event aims to help participants develop the skills and knowledge needed to begin exploring quantum computing, including an understanding of quantum circuits, quantum gates, quantum algorithms, and quantum error correction.

Through hands-on activities and tutorials, participants will learn how to use Qiskit to write and run their own quantum programs, as well as how to work with IBM's cloud-based quantum computing platform, IBM Quantum Experience. The event also aims to foster a community of individuals interested in quantum computing, providing a space for attendees to connect, share knowledge and experiences, and collaborate with others in the field.

Overall, the objective of the IBM Quantum Qiskit Tool Hands-On event is to provide participants with a solid foundation in quantum computing and Qiskit, empowering them to continue learning and exploring the field on their own.

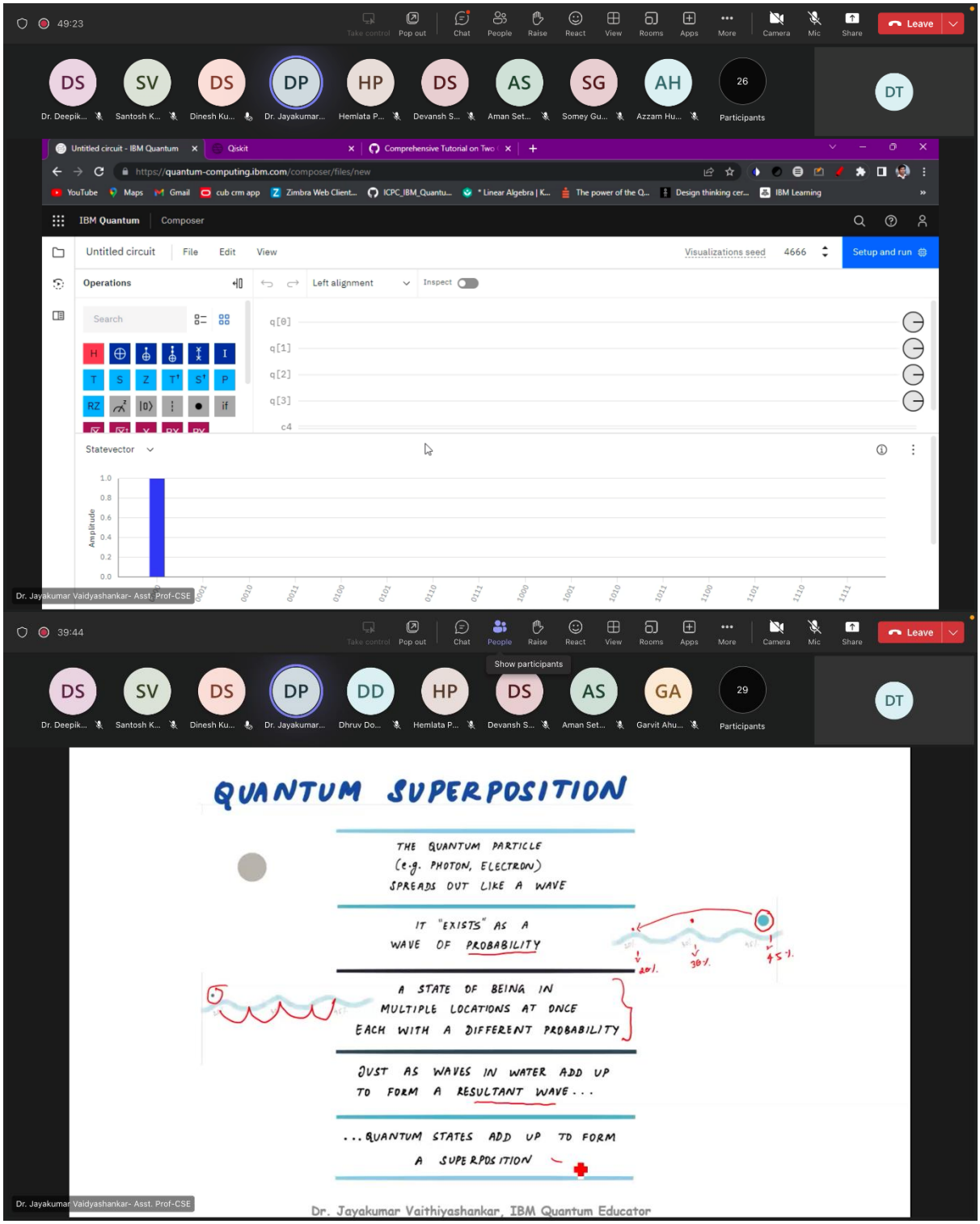
3. Beneficiaries of the Event

Students and faculty of School of Computer Science and Engineering

4. Details of the Guests

- Dr. Jayakumar, Serving as IBM Quantum Educator, and IBM Qiskit Advocate. Actively building Quantum Community in India.
- IBM Certified Associate Developer - Quantum Computation using Qiskit
- Having 14 years of experience in R&D as well as Lecturing at University level.
- Active Senior IEEE member and participating in IEEE Quantum standards.

5. Photographs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Qiskit
Comprehensive Tutorial on Two
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IBM Quantum
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Operations
Left alignment
Inspect
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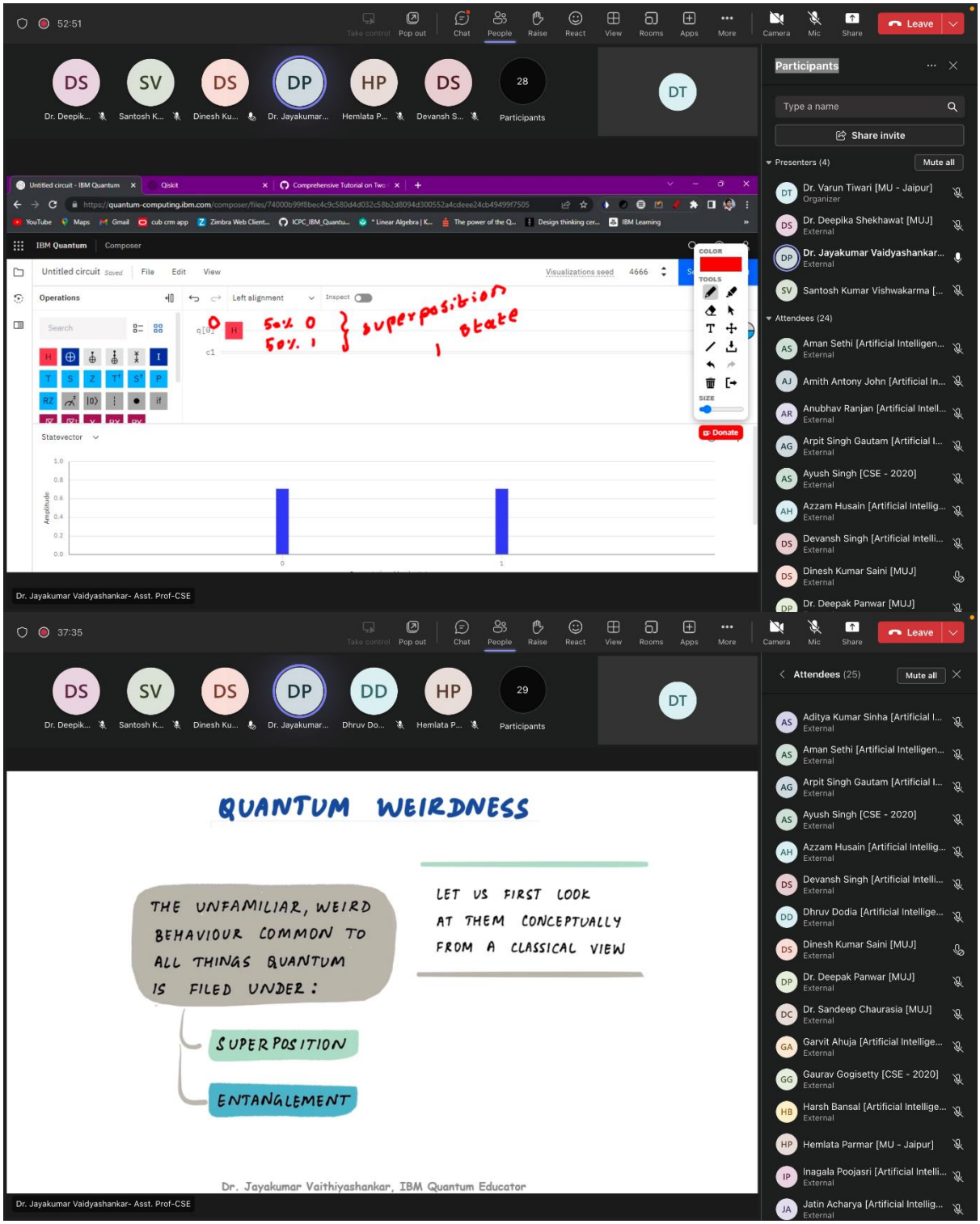
Statevector
Amplitude
Dr. Jayakumar Vaidyashankar- Asst. Prof-CSE
39:44
Show participants
Participants
QUANTUM SUPERPOSITION
THE QUANTUM PARTICLE
(e.g. PHOTON, ELECTRON)
SPREADS OUT LIKE A WAVE
IT "EXISTS" AS A
WAVE OF PROBABILITY
A STATE OF BEING IN
MULTIPLE LOCATIONS AT ONCE
EACH WITH A DIFFERENT PROBABILITY
JUST AS WAVES IN WATER ADD UP
TO FORM A RESULTANT WAVE...
...QUANTUM STATES ADD UP TO FORM
A SUPERPOSITION
Dr. Jayakumar Vaithiyashankar, IBM Quantum Educator
Dr. Jayakumar Vaidyashankar- Asst. Prof-CSE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Participants
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Presenters (4)
Mute all
Dr. Varun Tiwari [MU - Jaipur]
Organizer
Dr. Deepika Shekhawat [MUJ]
External
Dr. Jayakumar Vaidyashankar...
External
Santosh Kumar Vishwakarma [...
Attendees (24)
Aman Sethi [Artificial Intelligen...
Amith Antony John [Artificial In...
Anubhav Ranjan [Artificial Intell...
Arpit Singh Gautam [Artificial I...
Ayush Singh [CSE - 2020]
Azzam Husain [Artificial Intellig...
Devansh Singh [Artificial Intelli...
Dinesh Kumar Saini [MUJ]
Dr. Deepak Panwar [MUJ]
IBM Quantum
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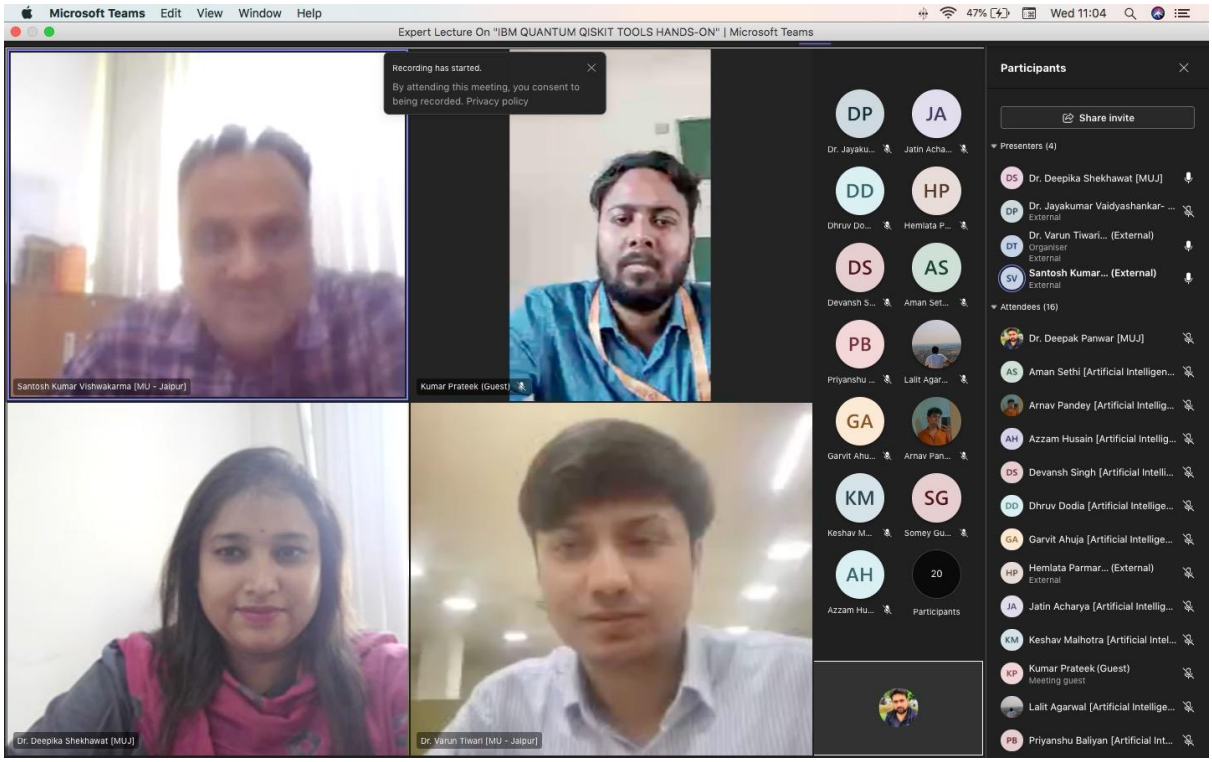
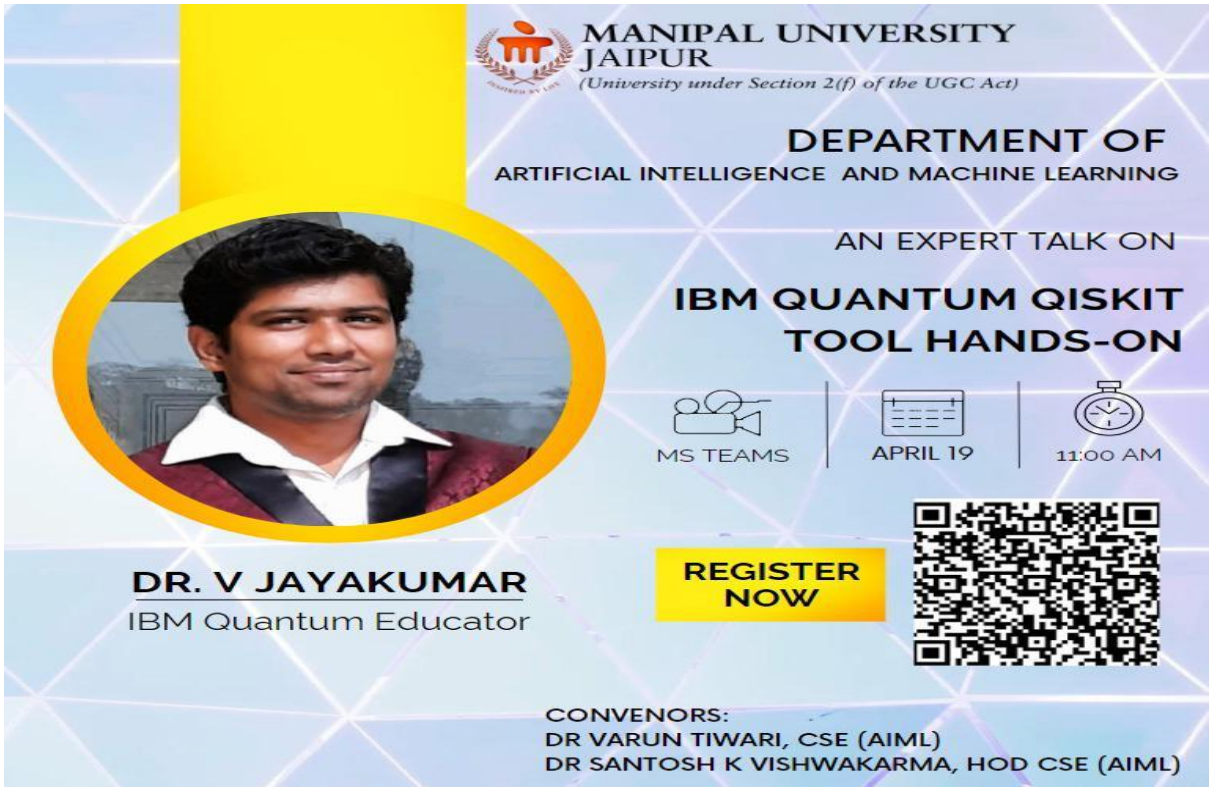
Dr. Jayakumar Vaidyashankar- Asst. Prof-CSE
37:35
Attendees (25)
Aditya Kumar Sinha [Artificial I...
Dhruv Dodia [Artificial Intellige...
Garvit Ahuja [Artificial Intellige...
Gaurav Gogisetty [CSE - 2020]
Harsh Bansal [Artificial Intellige...
Hemlata Parmar [MU - Jaipur]
Inagala Poojasri [Artificial Intelli...
Jatin Acharya [Artificial Intellig...
QUANTUM WEIRDNESS
THE UNFAMILIAR, WEIRD BEHAVIOUR COMMON TO ALL THINGS QUANTUM IS FILED UNDER:
LET US FIRST LOOK AT THEM CONCEPTUALLY FROM A CLASSICAL VIEW
SUPERPOSITION
ENTANGLEMENT
Dr. Jayakumar Vaithiyashankar, IBM Quantum Educator
Dr. Jayakumar Vaidyashankar- Asst. Prof-CSE



6. Brochure or creative of the event



7. Schedule of the event

Date: 19/4/2023

Time: 11:00 AM

Mode: Online (MS Teams)

8. Attendance of the Event

9. Total attendee-……..

Sr. No	Name of Institution	Place of Institution	Registration Number/Employee code	Name of Attendee	Name of Dept
1	MUJ	Jaipur		Dr. Varun Tiwari [MU - Jaipur]	CSE-AIML
2	MUJ	Jaipur		Dr. Deepika Shekhawat [MUJ]	CSE-AIML
3	MUJ	Jaipur		Dr. Jayakumar Vaidyashankar- Asst. Prof-CSE	
4	MUJ	Jaipur		Santosh Kumar Vishwakarma [MU - Jaipur]	CSE-AIML
5	MUJ	Jaipur		Dr. Deepak Panwar [MUJ]	CSE-AIML
6	MUJ	Jaipur		Jatin Acharya [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
7	MUJ	Jaipur		Dhruv Dodia [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
8	MUJ	Jaipur		Hemlata Parmar [MU - Jaipur]	CSE-AIML
9	MUJ	Jaipur		Devansh Singh [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
10	MUJ	Jaipur		Aman Sethi [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
11	MUJ	Jaipur		Priyanshu Baliyan [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
12	MUJ	Jaipur		Lalit Agarwal [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML

13	MUJ	Jaipur		Garvit Ahuja [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
14	MUJ	Jaipur		"Kumar Prateek "	CSE
15	MUJ	Jaipur		Arnav Pandey [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
16	MUJ	Jaipur		Azzam Husain [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
17	MUJ	Jaipur		Keshav Malhotra [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
18	MUJ	Jaipur		Somey Gupta [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
19	MUJ	Jaipur		Satvik Shaurya Singh [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
20	MUJ	Jaipur		Sai Vibhu Lade [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
21	MUJ	Jaipur		Maulik Varshney [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
22	MUJ	Jaipur		Divyangana Raghav [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
23	MUJ	Jaipur		Dr. Sandeep Chaurasia [MUJ]	CSE
24	MUJ	Jaipur		Pallavi [MUJ]	CSE
25	MUJ	Jaipur		Ayush Singh [CSE - 2020]	
26	MUJ	Jaipur		Ansh Srivastava [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
27	MUJ	Jaipur		Mr. Amit Kumar Bairwa [MUJ]	CSE-AIML
28	MUJ	Jaipur		Rahul Pandey [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
29	MUJ	Jaipur		Krish Tak[CSE - 2020]	CSE
30	MUJ	Jaipur		Harsh Bansal [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
31	MUJ	Jaipur		Vinayak Kanchan [Artificial Intelligence &	CSE-AIML

				Machine Learning -2021]	
32	MUJ	Jaipur		Inagala Poojasri [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
33	MUJ	Jaipur		Samraat Sapehia [Artificial Intelligence & Machine Learning -2021]	CSE-AIML
34	MUJ	Jaipur		Rachit Mahajan [CSE - 2021]	CSE
35	MUJ	Jaipur		Arpit Singh Gautam [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
36	MUJ	Jaipur		Dinesh Kumar Saini [MUJ]	CSE
37	MUJ	Jaipur		Gaurav Gogisetty [CSE - 2020]	CSE
38	MUJ	Jaipur		Milet Stanislos Dbritto [CSE - 2021]	CSE
39	MUJ	Jaipur		Aditya Kumar Sinha [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
40	MUJ	Jaipur		Samyak Jain [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
41	MUJ	Jaipur		Mahika Khanna [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
42	MUJ	Jaipur		Dr. Abhay Sharma [MUJ]	CSE
43	MUJ	Jaipur		Urvi Dhasmana [CSE - 2020]	CSE
44	MUJ	Jaipur		Ashi Malaiya [CSE - 2021]	CSE
45	MUJ	Jaipur		Kunal Jagdale [CSE - 2021]	CSE
46	MUJ	Jaipur		Anubhav Ranjan [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
47	MUJ	Jaipur		Amith Antony John [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
48	MUJ	Jaipur		Shikhar Maheshwari [Artificial Intelligence & Machine Learning - 2021]	CSE-AIML
49	MUJ	Jaipur		Dr. Rishi Gupta [MUJ]	CSE
50	MUJ	Jaipur		Megha Agarwal [CSE - 2020]	CSE
51	MUJ	Jaipur		Anuneet Rastogi [Artificial Intelligence &	CSE-AIML

				Machine Learning - 2021]	
52	MUJ	Jaipur		Dr. Neha Chaudhary [MU - Jaipur]	CSE
53	MUJ	Jaipur		Samridhi Chauhan[CSE - 2020]	CSE
54	MUJ	Jaipur		Nishant Jain	CSE
55	MUJ	Jaipur		Samarth Agarwal [CSE - 2020]	CSE
56	MUJ	Jaipur		Dr. Jeyakrishnan V [MUJ]	CSE
57	MUJ	Jaipur		Usha Jain [MU - Jaipur]	
58	MUJ	Jaipur		Dr. Santosh Kumar Henge [MU - Jaipur]	CSE
59	MUJ	Jaipur		Dr. Vinod Kumar	CSE
60	MUJ	Jaipur		Dr. Jayesh Gangrade [MUJ]	CSE-AIML

10. News Publication- News printed in newspaper or online links (if any) for news – insert images)

11. Feedback report of the Event

12. Link of MUJ website stating the event is uploaded on website

Seal and Signature of Head with date