

# THE LNM INSTITUTE OF INFORMATION TECHNOLOGY, JAIPUR

## Event Report Format

S. No.	Particulars	Response																		
1	Name of the Event/ Activity	<b><u>Distinguished Talk by Prof Rajeev Shorey</u></b>																		
2	Program Category (FDP/ EDP/ UHV-FDP/ Conference/ Workshop/ Webinar/ Seminar/ Invited Talk/ Distinguished Lecture/ Induction Program/ Orientation Program/ Hackathon/ GIAN Course/ Sort-Term Course/ Training Session/ Cultural Program/ Competition/ Sports Event/ ISR Activity/ Charity Program/ Swachhta Program/ Healthcare Activity/ Others)	<b><u>Distinguished Lecture</u></b>																		
3	Theme of the Event (Technology/ Innovation/ Research Methodology/ IPR/ Start-up/ Entrepreneurship/ Skill Development/ Stress Management/ Motivation/ Gender Sensitization/ Women Empowerment/ Career Development/ Leadership/ Awareness/ Social Service/ Mentoring/ Road Show/ Exhibition/ Others)	<b><u>Recent Investigations in Machine Learning and Edge Computing</u></b>																		
4	Program Level (National/ International/Departmental/ Institutional/ District/ State)	<b><u>Institutional</u></b>																		
5	Program Category (Institute Lead Activity/ Student Lead Activity)	<b><u>Institute Lead Activity</u></b>																		
6	Organized for? (Faculty/ Staff/ Students/ Industry Persons/ Open for All)	<b><u>Faculty/ PhD Scholars</u></b>																		
7	Program Starting Date (dd/mm/yyyy)	<b><u>04/03/2023</u></b>																		
8	Program Ending Date (dd/mm/yyyy)	<b><u>04/03/2023</u></b>																		
9	Program Duration (in hours)	<b><u>1.5 hours</u></b>																		
10	Event Organized by (Department/ Centre/ Club/ Society/ Group)	<b><u>Centre</u></b>																		
11	Name and Contact details of Coordinator(s)	<b><u>Prof. Ranjan Gangopadhyay (9461686716), Dr. Anirudh Agarwal (9460478956)</u></b>																		
12	Details of External Partner or Sponsoring Body/ Organization, if any?	<b><u>NA</u></b>																		
13	Mode of Conduction (Online/ Offline/ Hybrid)	<b><u>Offline</u></b>																		
14	Venue of the Event	<b><u>LT-05, LNMIIT Jaipur, India</u></b>																		
15	Details of Participants	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>No. of Internal Students</td> <td style="text-align: center;">15</td> </tr> <tr> <td>No. of Internal Faculty</td> <td style="text-align: center;">14</td> </tr> <tr> <td>No. of Internal Staff</td> <td style="text-align: center;">-</td> </tr> <tr> <td>No. of External Students</td> <td style="text-align: center;">-</td> </tr> <tr> <td>No. of External Faculty</td> <td style="text-align: center;">-</td> </tr> <tr> <td>No. of External Staff</td> <td style="text-align: center;">-</td> </tr> <tr> <td>No. of Industry Persons</td> <td style="text-align: center;">-</td> </tr> <tr> <td>No. of International Participants</td> <td style="text-align: center;">-</td> </tr> <tr> <td><b>Total Participants</b></td> <td style="text-align: center;"><b>29</b></td> </tr> </tbody> </table>	No. of Internal Students	15	No. of Internal Faculty	14	No. of Internal Staff	-	No. of External Students	-	No. of External Faculty	-	No. of External Staff	-	No. of Industry Persons	-	No. of International Participants	-	<b>Total Participants</b>	<b>29</b>
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16	Details of Invited Speakers/ Experts/ Industry Persons (Name, Designation, Organization Name)	<b><u>Prof. Rajeev Shorey, CEO, UQIDAR, IIT Delhi, New Delhi, India</u></b>																		

17	Funding details	Expenses from the Institute Fund	
		Grant received from Sponsoring or Partnering Body/ Organization	=
		Grant received from Govt. Bodies	=
		<b>Total Expenditure</b>	
18	Details of the Winners along with Prize details? in case of Competition/ Hackathon/ Debate/ Sports event	<b><u>NA</u></b>	
19	Brief note about the event	The talk highlighted the research challenges in the intersection of Machine Learning and Edge Computing. More specifically, the Federated Learning (FL) paradigm in a faulty edge ecosystem. It discussed the real-world applications to highlight the impact of the designed mitigation strategy. The talk concluded with a brief discussion of several open research problems in the intersection of Machine Learning and Edge Computing.	
20	Program Outcome? If any	<b><u>Knowledge Enhancement of Participants in the area of Edge Computing and Federated learning</u></b>	

**Important Notes:**

1. Please capture some **geo-tagged** photographs along with **simple photographs**
2. Please provide signed list of participants along with soft copy in excel/ word format: Attached
3. Please provide copy of the Participation Certificates, if issued to participants: **NA**

**Soft copies of the report, photographs (both geo-tagged and simple), certificates issued to participants are to be mandatorily sent to [events@lnmiit.ac.in](mailto:events@lnmiit.ac.in)**

**Signed hard copies of the same are also to be submitted to IDAAR Cell.**

**Date of report submission: 18-03-2023**

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S/d  
**Dr. Anirudh Agarwal**  
**Name and Signature of the Coordinator(s)**

## **Distinguished Talk on “Recent Investigations in Machine Learning and Edge Computing” by Prof. Rajeev Shorey**

**Date: March 4, 2023**

### **A Brief Report**

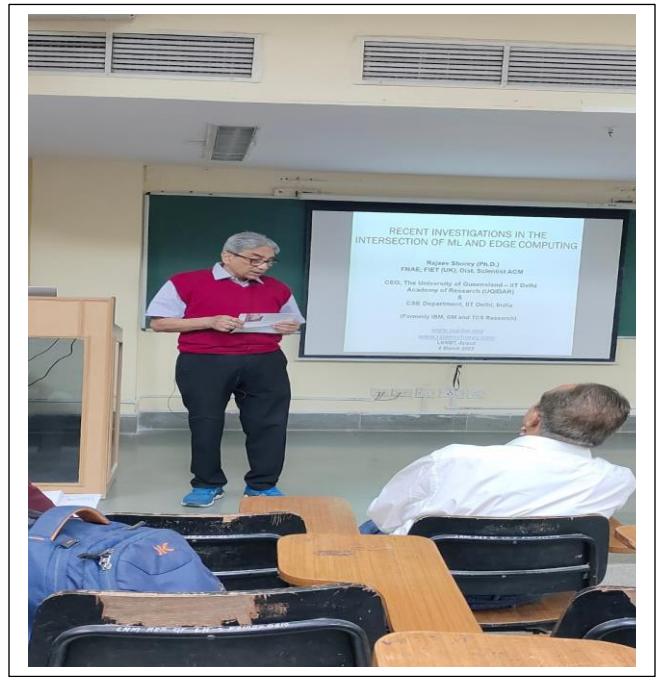
The Centre for Next Generation Communication and Networking at LNMIIT organized a distinguished talk “Recent Investigations in Machine Learning and Edge Computing” on 4<sup>th</sup> March 2023 in LT-5 (LNMIIT) during 11:00 am-12:30 pm. by Prof. Rajeev Shorey, UQIDAR, IIT Delhi. The talk was truly a grand success.

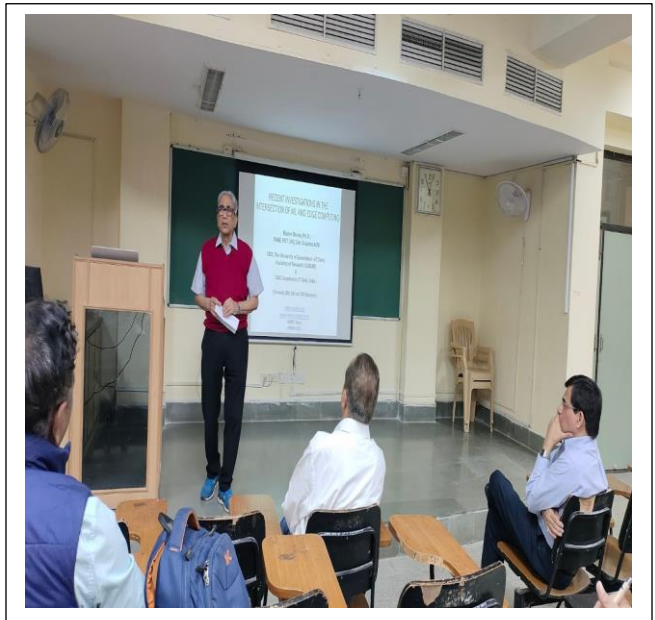
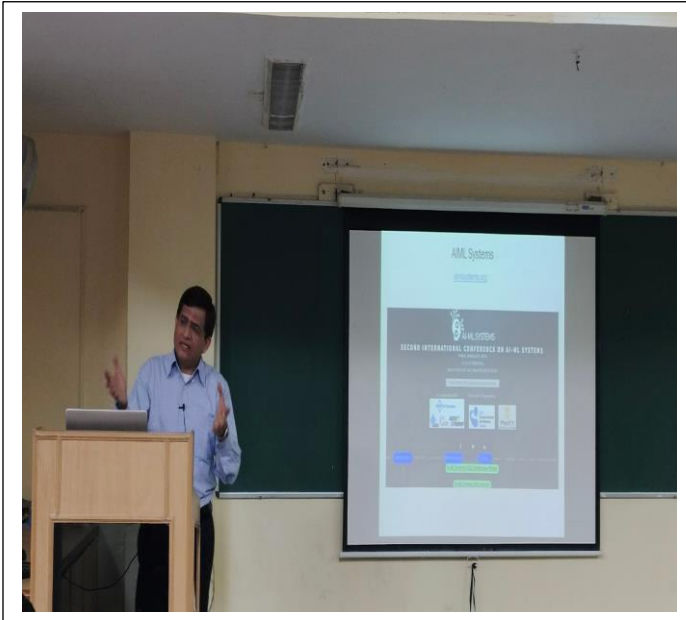
The talk highlighted the research challenges in the intersection of Machine Learning and Edge Computing. More specifically, the Federated Learning (FL) paradigm in a faulty edge ecosystem. It discussed the real-world applications to highlight the impact of the designed mitigation strategy. The talk concluded with a brief discussion of several open research problems in the intersection of Machine Learning and Edge Computing.

There were around 25 participants including 10 faculty members and 15 research scholars in the audience who enjoyed the talk.

The speaker’s biography and abstract of the talk are provided in the attached flyer.

Few of the glimpses of the workshop are depicted below:





## Distinguished Talk

### *Recent Investigations in Machine Learning and Edge Computing*

The *Centre for Next Generation Communication and Networking (C-NGCN)*, Department of ECE, LNMIIT cordially invites you to attend a distinguished talk by **Dr. Rajeev Shorey**, CEO, The University of Queensland - IIT Delhi Academy of Research (UQIDAR).

### About the Speaker

Dr. Rajeev received his Ph.D., M.S. and B.E. degrees all from the prestigious institute, IISc, Bangalore. He is currently the CEO of the UQIDAR at IIT Delhi. He is also an adjunct faculty member in the CSE department at IIT Delhi and holds an honorary professorship at the University of Queensland, Australia. Prior to his current responsibilities, Dr. Rajeev served as the first President of NIIT University and as Principal Scientist at the TCS Innovation Labs. Dr. Rajeev has had a remarkable career in industry spheres e.g, General Motors India Science Laboratory, IBM India Research Laboratory and SASKEN Technologies.



Professionally, Dr. Rajeev is well-known for his pioneering contributions in the areas of Computer networks, Wireless technologies including IoT, Network security, AI/ML, and Computing paradigms. He has to his credit more than 75 publications in international journals and conferences, 13 US patents and has played a significant role as the member of the editorial board of the IEEE IoT Journal and Springer's Journal of Wireless Networks. He is an ACM Distinguished Scientist as well as a Fellow of both IET and INAE. He serves on the Executive Council of ACM India and IEEE Communication Society, Delhi Chapter. He is the co-founder & steering committee co-chair of two highly reputed conferences in India – COMSNETS and AIML Systems.

### About the Talk

We highlight the research challenges in the intersection of Machine Learning and Edge Computing. More specifically, we look at the Federated Learning (FL) paradigm in a faulty edge ecosystem. We first analyze the impact of the number of edge devices on an FL model and provide a strategy to select an optimal number of devices that would contribute to it. We observe the impact of data distribution on the number of optimal devices. We then investigate how the edge ecosystem behaves when the selected devices fail and provide a mitigation strategy to ensure a robust FL technique. Finally, we digress on real-world applications to highlight the impact of the designed mitigation strategy. The talk will conclude with a brief discussion of several open research problems in the intersection of Machine Learning and Edge Computing.

**Date: March. 04, 2023**

**Time: 11:00-12:00 PM**

**Venue: LT-05**