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A One Day Wrokshop on

"Basics of Artificial Intelligence (AI) & Machine Learning (ML) Applications in Internet of Things (IOT)"

In hybrid Mode

Date: 25-08-2023 Time: 11:00 AM onwards

Detail of Participants

Sr.No	Students and	Name of Institute	Number of
	Faculty Members		Participants
1	Students: 3 rd 5 th and	GNIET, Nagpur	71
	7 th semester		
2.	Faculty participants	Other Institutes from	10
	from other Institutes	Nagpur Region	
3.	Faculty participants	Other Institutes from	10
	from other Institutes	remaining	
		Maharashtra	
4.	Faculty participants	From other states	24
	from other Institutes		
		Total	115



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Event Convener

Dr. Balram Timande HOD (CSE)





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Program Schedule

Day and Date	Time	Name of the Expert	Organization	Торіс				
	10:30 AM to 11:00 AM	Inauguration of the Workshop						
	11:00 AM to 12:00 PM	Dr. Nilesh B Bahadure	Symbiosis Institute of Technology Nagpur, Maharashtra	AI & ML applications in IOT				
Friday, 25/08/2023	12:15 PM to 01:30 PM	Dr. Latika Pinjarkar Maharashtra		Basic fundamentals of AI and ML				
25/08/2025	01:30 PM to 02:30 PM	Lunch Break						
	02:30 PM to 04:00 PM	Mr. Trivikrama	AI-Master and IIT Delhi Alumnus (AIR 99)	Artificial Intelligence				
	4:15 PM	Vote of Thanks and Valedictory						



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A

Report On

One Day Workshop Organized by

Department of Computer Science and Engineering

in Association with ISTE, New Delhi

Workshop Title: "Basics of Artificial Intelligence (AI) & Machine Learning (ML) Applications in Internet of Things (IOT)"

Date: 25 August 2023

Venue: Auditorium, GNIET, Nagpur (M.S.)

Introduction

The Department of Computer Science and Engineering (CSE) at GNIET, Nagpur, organized an ISTE (Indian Society for Technical Education) workshop on 25th August 2023. The workshop aimed to provide a platform for educators, researchers, and professionals to exchange knowledge and insights into the latest advancements in the field of computer science and engineering. The workshop covered a range of topics including artificial intelligence, machine learning, cyber security, and software engineering.



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Objectives of the Workshop

- One of the primary objectives of such a workshop is to educate participants about the fundamental concepts, technologies, and applications of AI, ML, and IOT. This could involve explaining what these technologies are, how they work, and their real-world implications.
- participants working with AI, ML, and IOT tools and platforms, experimenting with datasets, and gaining practical experience in implementing algorithms or building simple IOT devices
- The workshop may aim to equip participants with practical skills that they can use in their professional careers. This could involve teaching participants how to use specific programming languages, frameworks, and tools related to AI, ML, and IOT
- Participants might be guided through problem-solving exercises and case studies that demonstrate how AI, ML, and IOT can be applied to solve realworld challenges. This could help participants understand the potential of these technologies in various industries
- As AI, ML, and IOT technologies raise ethical and social concerns, the workshop might cover topics related to responsible AI usage, data privacy, bias mitigation, and the societal impact of these technologies.

Workshop Highlights

- 1. **Inaugural Function:** The workshop commenced with an inaugural session where distinguished guests, including faculty members, students, Principal GNIET, and the workshop organizers were present. Principal sir, Convener and Coordinator of the workshop delivered inspiring speeches highlighting the importance of continuous learning and adapting to the rapidly evolving field of computer science
- 2. **Keynote Address:** Honorable Principal GNIET, Nagpur delivered keynote addresses on diverse topics. These sessions provided valuable insights into cutting-edge technologies and trends, fostering a sense of curiosity and enthusiasm among the participants



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- 3. **Technical Sessions:** The workshop comprised multiple technical sessions, each focusing on specific areas of computer science and engineering. These sessions were led by subject matter experts who presented research findings, case studies, and practical applications, promoting an interactive and engaging learning environment. Sessions were conducted as per schedule given earlier.
- Machine Learning: This session was conducted by Dr. Latika Pinjarkar, Associate Professor and Head, Computer Science and Engineering, Symbiosis Institute of Technology, Nagpur. In this session, participants delved into the intricacies of AI and ML, exploring real-world applications and discussing the ethical implications of these technologies.
- Internet of things: This session was conducted by Dr. Nilesh B. Bahadure, Associate Professor and Head, Computer Science and Engineering, Symbiosis Institute of Technology, Nagpur. The speaker delved into diverse applications of IoT across various sectors. The lecture provided insights into the underlying architecture of IoT systems, discussing sensors, actuators, communication protocols, and cloud platforms. The audience gained an understanding of how data flows from devices to cloud servers for processing and analysis.
- Artificial Intelligence: This session was conducted by Mr. Trivikram, AI Expert, New Delhi. The expert lecture on AI successfully illuminated the intricacies of artificial intelligence, spanning its foundational principles, practical applications, and ethical dimensions. Attendees departed with a broader perspective on AI's significance, its transformative capabilities, and the imperative of responsible AI development.

Workshop Outcomes:

The "AI & ML Applications in IOT" workshop organized by the Department of Computer Science and Engineering (CSE) at GNIET, Nagpur, on 25th August 2023, aimed to provide participants with a range of program outcomes that would enhance their knowledge and skills in the areas of AI, ML, and IOT. The workshop's program outcomes can be summarized as follows;



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By the end of workshop, participants will be able to

1. Understand concepts of AI, ML and IOT:

Participants gained a clear understanding of the fundamental concepts of Artificial Intelligence (AI), Machine Learning (ML), and Internet of Things (IOT). They were introduced to the terminology, principles, and key components of each of these domains. Through in-depth sessions participants were exposed to various AI and ML techniques. They learned about supervised and unsupervised learning algorithms, data preprocessing, model training, and evaluation, enhancing their ability to apply these techniques in real-world scenarios

2. Learn to Integrate AI ML with IOT

Participants learned how AI and ML techniques can be integrated with IOT systems to enhance their functionality and decision-making capabilities. They gained insights into how AI-driven analytics can extract meaningful insights from IOT-generated data.

3. Learn to improve reliability and to lower equipment failure rates

Participants were introduced to the concept of predictive maintenance using AI and ML in IOT scenarios. They learned how these techniques can be used to predict equipment failures and optimize maintenance schedules, improving operational efficiency

4. Provide solutions for real time applications

Through case studies and discussions, participants were made aware of the real-world applications of AI, ML, and IOT across industries such as healthcare, manufacturing, and smart cities. This knowledge broadened their perspective on potential career paths and opportunities

Participants had the opportunity to engage in interactive panel discussions with experts from academia and industry. This fostered a platform for asking questions, seeking guidance, and gaining insights into the future trends and challenges in AI,



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ML, and IOT. By the end of the workshop, participants were equipped with practical skills in implementing AI and ML techniques within IOT contexts. This skill enhancement positioned them to contribute effectively to projects and research in these evolving domains.

Event	PO1	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO
(Workshop)		2	3	4	5	6	7	8	9	10	11	12
Attainment Level	3	2	3	2	3	2	2	2	2	3	3	3
%	100	67	100	67	100	67	67	67	67	100	67	67
Attainment	%	%	%	%	%	%	%	%	%	%	%	%

Program Outcomes (POs) achieved by the students participants:

• 3= High level ; 2= Moderate level; 1= Low level

PO-1 Engineering knowledge:

PO-2 Problem analysis:

PO-3 Design/development of solutions:

PO-4 Conduct investigations of complex problems:

PO-5 Modern tool usage:

PO-6 The engineer and society:

PO-7 Environment and sustainability:

PO-8 Ethics:

PO-9 Individual and team work:

PO-10 Communication:

PO-11 Project management and finance:

PO-12 Life-long learning:



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Participants Feedback:

Feedback from participants was overwhelmingly positive. They appreciated the workshop's well-structured sessions, interactive nature, and the opportunity to learn from both academic and industry experts. Participants found the hands-on workshops particularly valuable as they provided practical exposure to the concepts discussed

Conclusion:

The ISTE Workshop organized by the Department of Computer Science and Engineering at GNIET, Nagpur, on 25th August 2023, was a resounding success. It fostered a collaborative learning environment, facilitating the exchange of knowledge and ideas among participants and experts. The workshop played a crucial role in equipping attendees with the latest advancements in computer science and engineering, ensuring their continued growth and relevance in the field.

Report Prepared by:

Prof. Kalpana Malpe & Prof. Shubhangi Ghadinkar **Coordinator**

Dr. Balram Timande Convener

Principal GNIET, Nagpur

Few Glimpses of the workshop:





















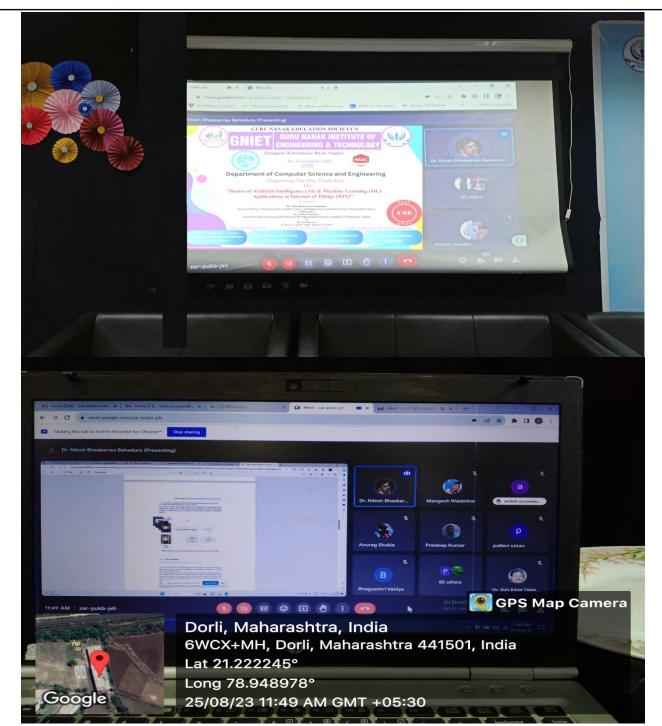






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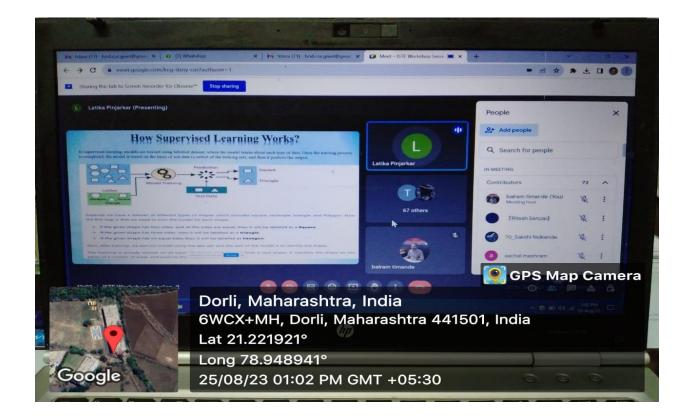


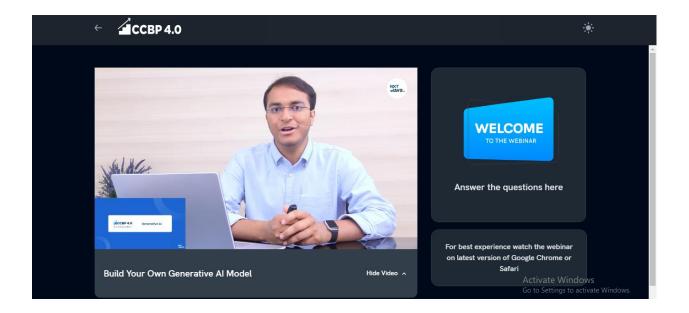




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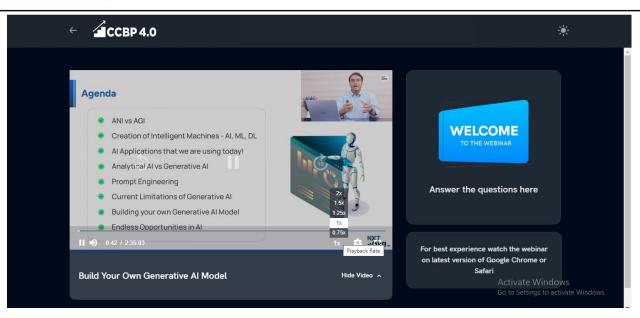
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8/29/23, 11:14 AM

Participants Feedback form

Participants Feedback form

75 responses

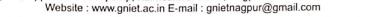
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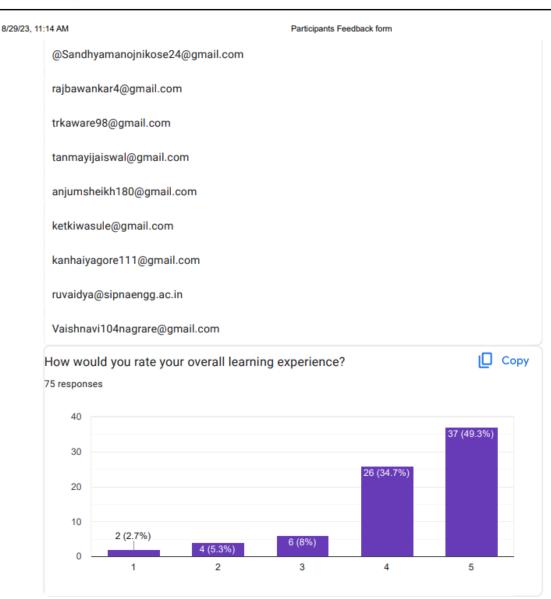
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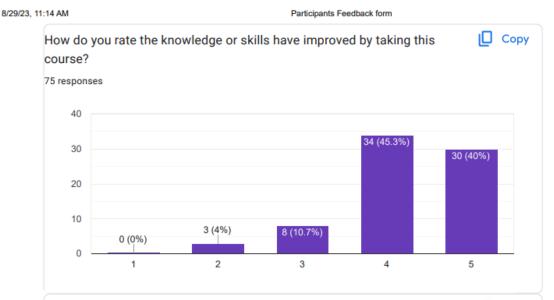




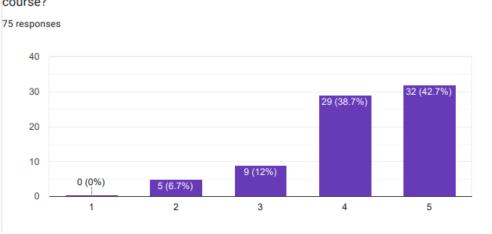
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How was the quality of the content, and consistency throughout the course?



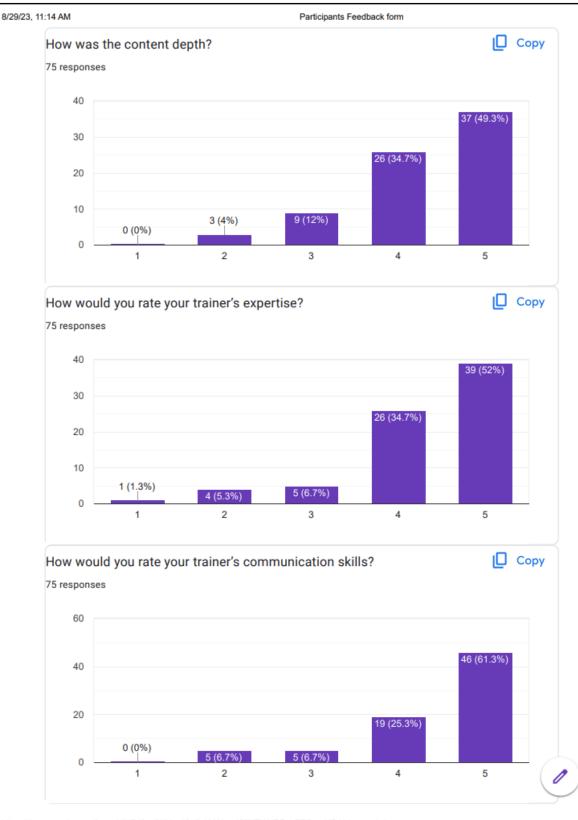


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8/29/23, 11:14 AM Participants Feedback form Copy How would you rate your trainer respond to your queries in a timely manner? 75 responses 40 30 32 (42.7%) 1 (41.3%) 20 10 0 (13.3%) 2 (2.7%) 0 (0%) 0 2 3 4 5 Copy How would you rate that you feel comfortable expressing your problems to your trainer? 75 responses 40 30 32 (42.7 30 (40%) 20 10 10 (13.3%) 3 (4%) 0 (0%) 0 2 3 4 5 1 О Сору Did the training content meet your expectations? 75 responses YES NO 🔵 Can't Say 88%

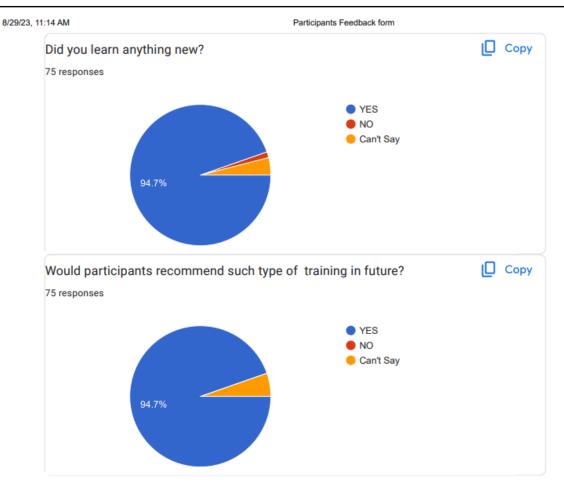
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Thank You for Participation and Nice Feedback. Have a Nice day

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Participants Attendance:

1	JYOTI P SATHE	PRIYADARSHINI COLLEGE OF ENGINEERING	online
		Govindarao wanjari college of engineering and technology	online
2	ASHWINI VINOD WAGHALE	5	
3	GAURAV ARVIND KUKADKAR	Agnihotri College of Engineering Nagthana	online
4	AVISHKAR WANJARI	GWCET	online
_		Govindrao Wanjari College of Engineering & Technology	online
5	VIPIN VINOD JAIS	Nagpur	
6	PRAVIN SHIVAJI LOKHANDE	ACE, wardha	online
7	TANSHRI WANJARI	Agnihotri college of engineering wardha	online
8	Lalitkumar P Bhaiya	Bharti Vishwavidyalaya,Durg	online
9	Dr. Shailendra Verma	CCET Bhilai	online
10	DR SHRIKANT BURJE	Christian College of Engineering and Technology Bhilai	online
11	DR. AJAY KUSHWAHA	Rungta College of Engineering and Technology	online
12	SANDEEP BHAURAO THAKRE	TGPCET	online
13	JYOTSANA KAIWART	Bhilai Institute of Technology Durg	online
14	PRITHA GUPTA	BHILAI INSTITUTE OF TECHNOLOGY, DURG	online
15	Harish P Kapgate	Agnihotri College Of Engineering Wardha	online
16	SHRADDHA KAUSHIK	Assistant Professor/Bhilai Institute of Technology Durg	online
17	Suresh Babu Racharla	Jawaharlal Nehru Technological University	online
18	GOURAV SHANKAR	Bhilai Institute of Technology, Durg	online
	Dr CHANDRASHEKHAR		online
19	KAMARGAONKAR	IIIT Nagpur	
20	PRAFUL NANDANKAR	Government College of Engineering Nagpur	online
		Sandip Institute of Technology and Research Centre,	online
21	Dr Nandkishor Marotrao Sawai	Nashik	
22	SANJAY G SAKHARWADE	Rungta College of Engineering and Technology, Bhlai	online
23	Akash Dasharath Girhe	Ace	online
24	DR NAGENDRA TRIPATHI	Bhilai Institute of Technology, Durg, C.G	online
25	Dr NAGENDRA TRIPATHI	Bhilai Institute of Technlogy, Durg, C.G.	online
26	REKHANSH RAO	SPEC HYD	online
27	NIKITA ANGLAL KATRE	Wainganga college nagpur	online
	RUSHIKESH SURESH		online
28	SONTAKKE	Agnihotri College Of Engineering Nagthana	
29	Dr. Shailendra Verma	CCET Bhilai	online
30	ASHUTOSH JOSHI	Asst.Prof.JDCOEM, Nagpur	online
31	NIKITA ANGLAL KATRE	WAINGANGA COLLEGE NAGPUR	online
32	BHAGYASHRI UMESH VAIDYA	Agnihotri college of enginering wardha	online
33	RAJESHRI UMESH VAIDYA	Sipna College of Engineering & Technology, Amravati	online
34	PRAVIN SHIVAJI LOKHANDE	Aganihotri college of engineering	online
35	DR. RAVI SHANKAR RAI	Sandip Institute of Technology and Research Centre, Nashik Maharashtra	online
36	Garikapati Pruthvi Raju	Sandip institue of engineering and technology and research center	online





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		Rungta College of Engineering and Technology Bhilai,		online	
	38	ALOK KUMAR	Chhattisgarh		
	39	ANAND KUMBHARE	Rungta College of Engineering and Technology Bhilai	online	
Γ			RUNGTA COLLEGE OF ENGINEERING & TECHNOLOGY,	online	
	40	SURAJ BANDHEKAR BHILAI			
			RUNGTA COLLEGE OF ENGINEERING AND	online	
	41	DR. C RAMESH KUMAR	TECHNOLOGY BHILAI		
	42	DR JAYANT DAMODAR SUPE	Rungta College Of Engg & Technology, Bhilai	online	
	43	DR PANKAJ RANGAREE	VAAGDEVI COLLEGE OF ENGINEERING	online	
			RUNGTA COLLEGE OF ENGINEERING AND	online	
	44	PRADEEP KUMAR	TECHNOLOGY BHILAI CHHATTISGARH		

Sample Certificate:

