J.B. INSTITUTE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)
Accredited by NBA & NAAC
Bhaskar Nagar, Moinabad Mandal, R.R. District, Hyderabad -500075

REPORT ON

Designing energy-efficient AI Architectures to reduce carbon footprint in large scale model training by Dr K.Roshan

(topic: Enhancing public service delivery through AI powered citizen centric governance models)

Technical event Organized By

Artificial Intelligence and Data Science

Date: 27th January 2026

Venue: 101 Lab, AIDS &CSD Block JB Institute of Engineering & Technology

Mode: Offline (J.B. Institute of Engineering & Technology, Hyderabad)

Faculty Coordinators: Dr K.Roshan & Ms. V. Eswari J.B. INSTITUTE OF ENGINEERING & TECHNOLOGY (UGC AUTONOMOUS)

TABLE OF CONTENTS

1. INTRODUCTION

The seminar on "Designing Energy-Efficient AI Architectures to Reduce Carbon Footprint in Large Scale Model Training" was organized to create awareness among students about the growing environmental impact of large-scale AI systems. With the rapid expansion of deep learning models, energy consumption and carbon emissions have become major concerns. The session emphasized sustainable AI practices and responsible model design.

2. OBJECTIVES

- To understand the energy challenges in large-scale AI model training.
- To explore techniques for designing energy-efficient AI architectures.
- To promote sustainable and environmentally responsible AI development.

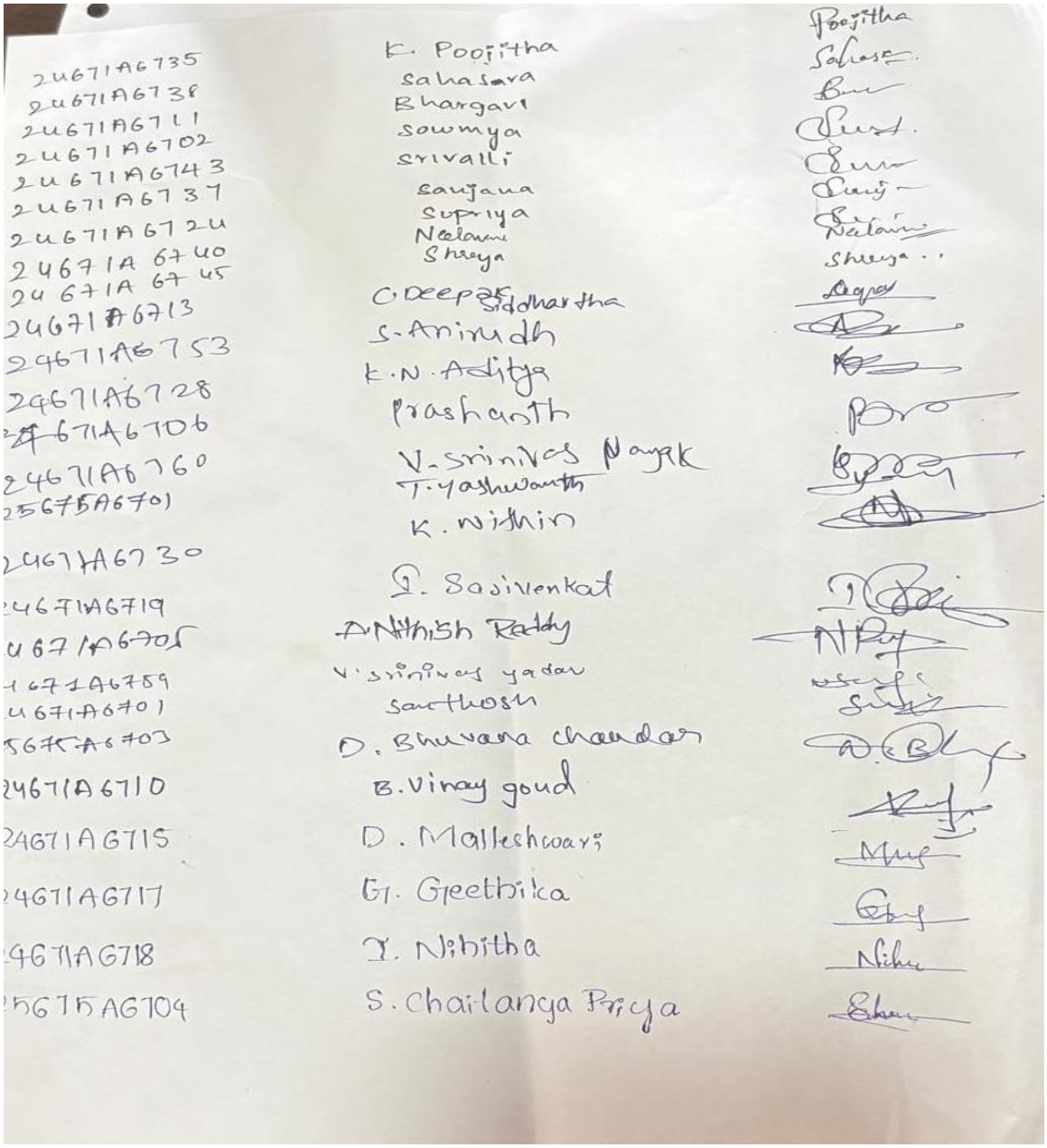
3. EVENT REPORT

Dr. K. Roshan, HoD, delivered an insightful session focusing on the relationship between AI scalability and energy usage. He discussed model optimization techniques, efficient hardware utilization, and algorithm-level improvements that help reduce power consumption. The session also covered real-world case studies demonstrating how optimized architectures can significantly lower carbon emissions without compromising performance.

4. SPEAKER PROFILE

Dr. K. Roshan is the Head of the Department with extensive experience in Artificial Intelligence and Data Science. His research interests include sustainable AI systems, model optimization, and scalable machine learning architectures.

5. PARTICIPANTS



246171A6735	K. Poojitha	Poojitha
246171A6738	Sahasra	Sahasra
246171A6711	Bhargavi	Bhargavi
246171A6702	Soumya	Soumya
246171A6743	Srivalli	Srivalli
246171A6737	Sanjana	Sanjana
246171A6720	Supriya	Supriya
246171A6740	Neelam	Neelam
246171A6745	Sreeja	Sreeja
246171A6713	C. Deep Siddhartha	Deep
246171A6753	S. Aniruddh	Aniruddh
246171A6728	K.N. Aditya	Aditya
246171A6706	Prashanth	Prashanth
246171A6760	V. Srinivas Nayak	Srinivas
256715A6701	T. Yashwanth	Yashwanth
246171A6730	K. Nithin	Nithin
246171A6719	I. Sasivenkat	Sasivenkat
246171A6705	A. Nithish Reddy	Nithish
246171A6759	V. Srinivas yadav	Srinivas
246171A6701	Santhosh	Santhosh
256715A6703	D. Bhuvana chandar	Bhuvana
246171A6710	B. Vinay goud	Vinay
246171A6715	D. Malleshwari	Malleshwari
246171A6717	G. Geethika	Geethika
246171A6718	I. Nithitha	Nithitha
256715A6704	S. Chaitanya Priya	Chaitanya

Fig: List of students participating in Battle Quiz 2025

Sheela Vignesh	24671A6755	
Umesh Thote	24671A6758	
Yashraj	24671A6758	
Manmeet	24671A6752	
Pratik	24671A6747	
Vivek	24671A6735	
Rushil	24671A6742	
Vaibhavi	24671A6757	
Jasmin	24671A6723	
Irfan	24671A6754	
E. Shyam	24671A6716	
Bharath Goud	24671A6736	
Harsha Vardhan	25675A6706	
K. Rathik	25675A6702	
K Sivaram	24671A6725	
K. Mallikarjun	24671A6727	
A. Sowmya	24671A6702	
B. Akshitha	24671A6709	
B. Tharuni	24671A6712	
M. Nikitha	24671A6741	
R. Meghamala	24671A6748	

6. OUTCOMES& KEY HIGHLIGHTS

- Students gained awareness of AI's environmental impact.
- Understanding of energy-efficient model design techniques.
- Encouragement to adopt green AI practices in future projects.

7. FEEDBACK

Student Feedback

- **Umesh (II Year, CSD):** " "The seminar gave clear insights into how large-scale AI models impact the environment. Learning about energy-efficient architectures helped me understand the importance of sustainable AI development."."

- **Partik (II Year, CSD):** " The speaker explained complex concepts like carbon footprint and energy optimization in a simple and understandable way. The real-world examples were very helpful."

- **E Shyam (II Year, CSD):** " I found the discussion on optimizing model training and reducing power consumption very informative. It motivated me to consider green AI practices in my future projects."

- **M. Bharath Goud (II Year, CSD):** " I found the discussion on optimizing model training and reducing power consumption very informative. It motivated me to consider green AI practices in my future projects."

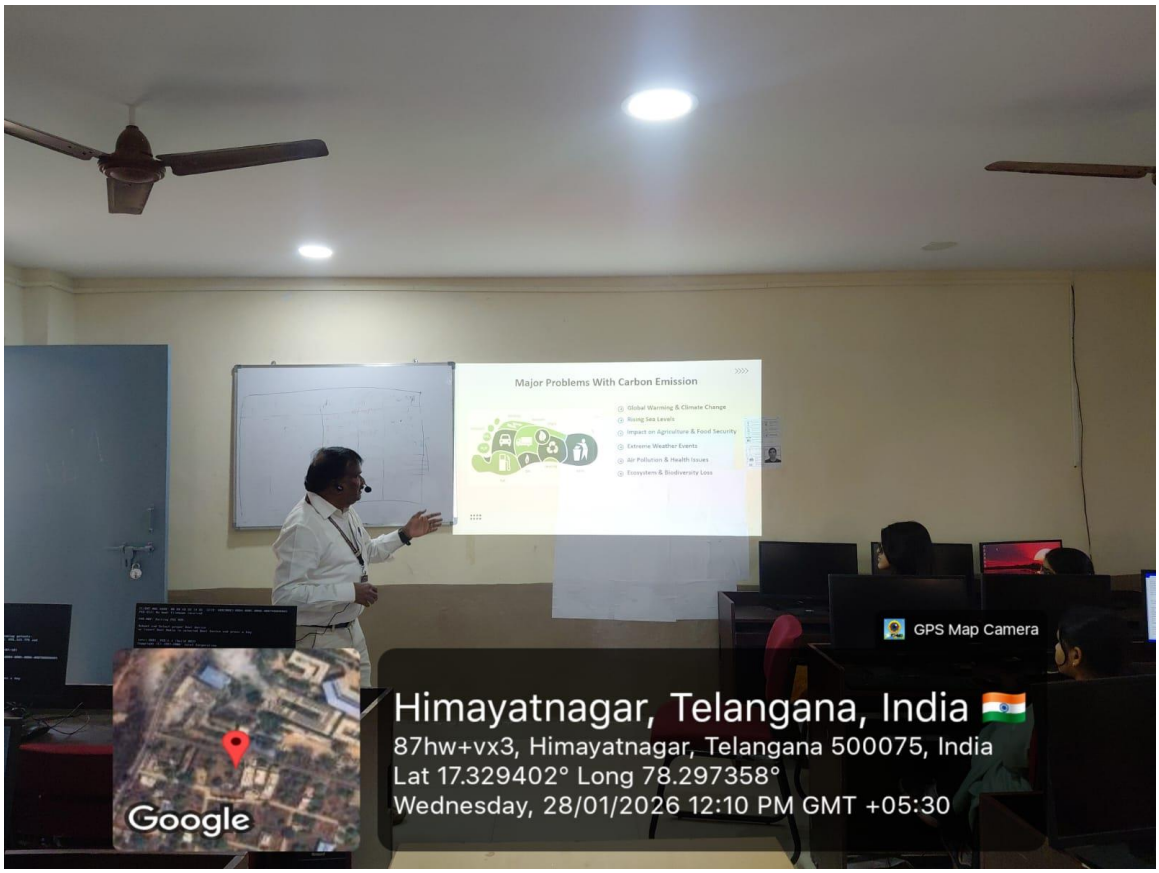
8. CONCLUSION

The seminar successfully highlighted the importance of designing energy-efficient AI systems. Students were motivated to think beyond accuracy and performance and consider sustainability as a key factor in future AI innovations.

9. EVENT PHOTO GALLERY


Carbon Footprint
CARBON FOOTPRINT
GPS Map Camera
Himayatnagar, Telangana, India
87hw+vx3, Himayatnagar, Telangana 500075, India
Lat 17.329386° Long 78.297378°
Wednesday, 28/01/2026 12:07 PM GMT +05:30
Google


GPS Map Camera
Himayatnagar, Telangana, India
87hw+vx3, Himayatnagar, Telangana 500075, India
Lat 17.329424° Long 78.29737°
Wednesday, 28/01/2026 12:10 PM GMT +05:30
Google


Major Problems With Carbon Emission
Global Warming & Climate Change
Rising Sea Levels
Impact on Agriculture & Food Security
Extreme Weather Events
Air Pollution & Health Issues
Ecosystem & Biodiversity Loss
GPS Map Camera
Himayatnagar, Telangana, India
87hw+vx3, Himayatnagar, Telangana 500075, India
Lat 17.329402° Long 78.297358°
Wednesday, 28/01/2026 12:10 PM GMT +05:30
Google


GPS Map Camera
Himayatnagar, Telangana, India
87hw+vx3, Himayatnagar, Telangana 500075, India
Lat 17.329425° Long 78.297371°
Wednesday, 28/01/2026 12:10 PM GMT +05:30
Google


Ways For Carbon Footprint Reduction
GPS Map Camera
Himayatnagar, Telangana, India 🇮🇳
87hw+vx3, Himayatnagar, Telangana 500075, India
Lat 17.329444° Long 78.297214°
Wednesday, 28/01/2026 12:19 PM GMT +05:30
Google