

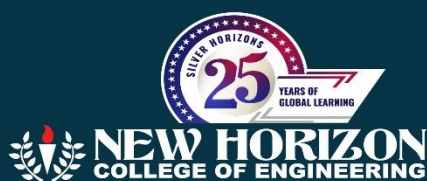


DEPARTMENT OF CSE (DATA SCIENCE)

Event: "Green by Design: Building Sustainable AI with Data Science"

Venue: Falconary Seminar Hall

Time-10:30 AM-12:30PM



Expert Talk

Building Sustainable AI with Data Science

 **24th September 2026**
 **10:30 AM - 12:30 PM**
 **Falconry Seminar Hall**
 **V Semester Students**



Dr. Niladri Mallick Choudhuri

Founder & CEO, Xellentro Consulting Services LLP |
President, Green Computing Foundation |
President, India Sustainable AI Consortium

Coordinator
Dr. Shanmugapriya G
Professor

Convenor
Dr. B Swathi
HOD CSE & CSE(DS)

Dr. R. J. Anandhi
Vice Principal - Academics

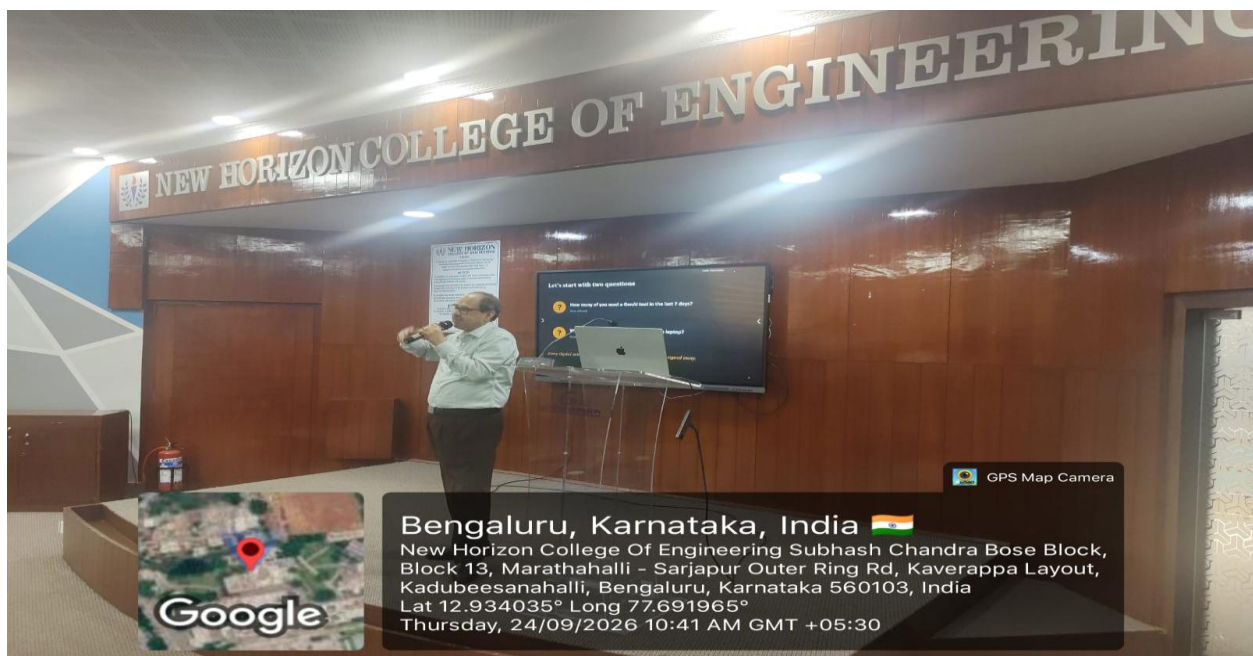
Dr. Manjunatha
Principal

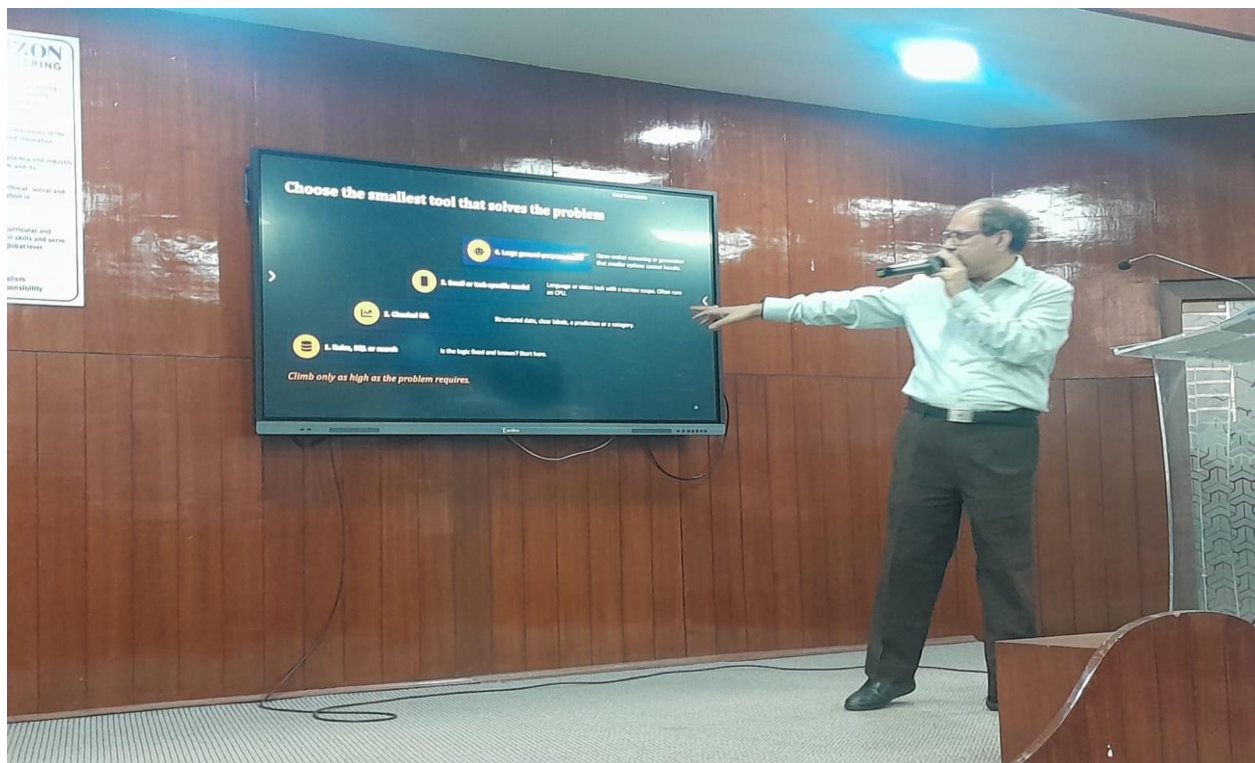
Organised by

Department of Computer Science and Engineering (Data Science)

The Department of Computer Science and Engineering (Data Science), New Horizon College of Engineering, organized a workshop titled “**Green by Design: Building Sustainable AI with Data Science**” on **24th September 2026** for **5th semester students**. The session was conducted by **Dr. Niladri Mallick Choudhuri**, Founder and CEO at Xellentro Consulting Services LLP.

The expert talk aimed to provide students with insights into how sustainability principles can be integrated into AI systems, ensuring that technological innovation aligns with environmental responsibility and long-term societal well-being. The session began with an overview of sustainable AI, explaining how organizations can design and deploy artificial intelligence systems while minimizing energy consumption, optimizing computational resources, and reducing environmental impact. In expert discussions, the emphasis was on how *Green by Design* shifts the paradigm from “AI as a performance-driven tool” to “AI as a responsible innovation partner,” raising both opportunities for ecological efficiency and challenges around scalability, ethics, and governance.



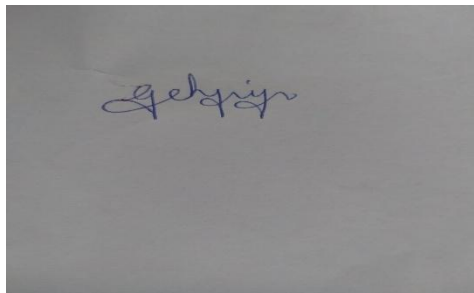


The benefits of adopting sustainable AI were presented comprehensively. Integration of *Green by Design* principles leads to reduced energy consumption and carbon footprint by optimizing algorithms, streamlining data pipelines, and utilizing eco-friendly infrastructure. It enhances efficiency and productivity by ensuring AI systems deliver high performance while consuming fewer computational resources, thereby lowering operational costs and environmental impact. Sustainable AI also enables organizations to achieve resilience by leveraging data science for predictive analytics in energy management, resource optimization, and climate modeling. Moreover, it strengthens long-term decision-making by embedding ecological awareness and data-driven insights into AI solutions, ensuring organizations can innovate responsibly while responding intelligently to global sustainability challenges.

The session also acknowledged the **challenges and considerations involved in implementing Green by Design and sustainable AI practices**. These challenges include high computational and infrastructure costs, difficulty in accurately measuring energy consumption and carbon emissions across the AI lifecycle, limited availability of standardized sustainability metrics, and the need for skilled professionals with expertise in both AI and sustainability. The session also highlighted challenges related to data quality and management, model performance versus energy efficiency trade-offs, hardware and legacy-system constraints, and the environmental impact of data centres, including energy and water consumption. In addition, concerns such as transparency in reporting environmental impact, responsible use of AI, and avoiding misleading sustainability claims were emphasized. The speaker stressed that addressing these challenges through energy-efficient algorithms, optimized data practices,

carbon-aware computing, efficient hardware, and lifecycle-based assessment is essential for building **responsible, effective, and environmentally sustainable AI**.

The talk fostered **career awareness and skill development in the emerging field of sustainable AI**, highlighting opportunities in green data science, energy-efficient AI development, sustainable computing, climate analytics, and resource optimization. It emphasized the importance of developing technical skills in data science, machine learning, model optimization, energy-efficient programming, and environmental data analysis, along with sustainability and responsible AI practices. Overall, the expert talk on **“Green by Design: Building Sustainable AI with Data Science”** helped students understand emerging career pathways and motivated them to contribute to environmentally responsible AI innovation and sustainable technological development..



Faculty Coordinator

Prof. Shanmuga Priya Ganesan



Convener

HOD-CSE-DS

Dr. B Swathi