One-Week National Skill Development Workshop
on
Data Science in Environmental Sustainability: Integrating Python and AI/ML

02.12.2024 – 07.12.2024

Organized by

Department of Environmental Science
University of Kalyani

About the Workshop:

In view of the growing threats worldwide posed by climate change, resource depletion, water scarcity, loss of biodiversity and environmental degradation; traditional methods of data analysis often fall short in addressing these complex problems due to the vast amounts of data generated and the intricate relationships within ecological systems. This workshop offers an interdisciplinary approach towards sustainability by integrating data science, Artificial Intelligence and Machine Learning (AI/ML) and domain expertise to tackle key environmental challenges. This workshop will equip participants with knowledge on Python and AI/ML skills for sustainable practices. Renowned academicians, experienced professionals, and researchers will share their insights through this scientific platform. Participants in this workshop will have the opportunity to learn best practices with theoretical background and hands-on robust practical sessions where the incumbents can use their expertise with more learned insights, share experiences, foster collaborations and networking with other professionals in the field of environmental sustainability.

Workshop Modules:

The modules of the workshop are:
- **Module 1:** Basics of Data Science and AI/ML
- **Module 2:** Basics of Python, data structures, control structures, functions & modules
- **Module 3:** Basics of Python data analysis, NumPy and Pandas libraries, Python arrays & data frames, data wrangling
- **Module 4:** Python for exploratory data analysis & data visualization
- **Module 5:** Python for Machine Learning (ML), Scikit-Learn library, basic ML applications
- **Module 6:** Application of AI/ML in Machine learning & Pollution Modelling; Ecological Modelling; Climate Modelling; GeoAI: AI driven Geo-spatial workflows; Health & Epidemiological Modelling, Risk Modelling for Hazards & Disasters; Resource Management & Research

Who can attend?

- **Target Participants:** PG students, Researchers, Faculty members, Industry people, Technicians.
- Basic knowledge of any **programming language** is desirable.
- Total number of **seats is limited to 45.**
- Participants will be selected on a 'first come, first-served' basis.

Registration fee: Rs. 4000/- through SBI collect

https://www.onlinesbi.sbi/sbicollect/icollecthome.htm
(Please upload the payment receipt in Google form during registration)
Payment procedure: https://tinyurl.com/KUEVS

How to Apply?

Registration through Google Form link:
https://forms.gle/5TFxPNDMfMiRmy4J6

(Before payment please check if the Google form registration link is active or not)

Venue : **University of Kalyani**

Important Dates:

- Opening of Registration: 11.09.2024
- Last date of Registration: 23.10.2024
- Workshop duration: 02.12.2024 - 07.12.2024

National Advisory Committee:

1. **Prof. Sanghamitra Bandyopadhyay**, Director, ISI, Kolkata
2. **Dr. Basanta Kumar Das**, Director, CIFRI, Barrackpore
3. **Prof. Krishna M. Ag**rawal, Director, IISWBM, Kolkata
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7. **Prof. Dinesh Mohan**, Jawharlal Nehru University, New Delhi
8. **Prof. Umesh Kumar Singh**, University of Allahabad, UP
9. **Prof. Maharaj K. Pandit**, O.P. Jindal Global University, Haryana
10. **Prof. N. S. Raju**, University of Mysore, Mysuru
11. **Dr. Gopal Krishna Dharba**, IISER, Kolkata

In-House Advisory Committee :

1. **Registrar**, University of Kalyani
2. **Finance Officer**, University of Kalyani
3. **Director, IQAC Cell**, University of Kalyani

Organizing Committee:

Patron: **Prof. Amalendu Bhunia**, Honb'le Vice-Chancellor, University of Kalyani

Convener: **Prof. Soma Mukherjee**, Head, Dept. of Environmental Science, University of Kalyani

Co-conveners:
- **Prof. Anirban Mukhopadhyay**, Dept. of Computer Science and Engineering, University of Kalyani
- **Prof. Partha Sarathi Mukhopadhyay**, Dept. of Library and Information Science, University of Kalyani

Members:

- **Prof. Keka Sarkar,** Dept. of Microbiology & Principal Academic Officer, KU
- **Prof. Surajit Chattopadhyay,** Dept. of Chemistry, KU
- **Prof. Jayanta Kumar Biswas,** Dept. of Ecological Studies, KU
- **Prof. Angshuman Bagchi**, Dept. of Biochemistry & Biophysics, KU
- **Dr. Srinka Basu,** Dept. of Engineering and Technological Studies, KU
- **Dr. Ujjal Marjit,** System-in-Charge, CIRM, KU
- **Dr. Alok Chandra Samal,** Dept. of Environmental Science, KU

For further information:

Contact: **Dr. Alok Chandra Samal**, Dept. of Environmental Science, University of Kalyani.

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N.B.: Accommodation will be provided on payment basis.