Training Programme on

AI & Machine Learning Applications in Natural Resource Management

📅 **October 03-07, 2023** (Physical mode)　　📍 **Venue:** ICAR-IISWC, Dehradun

Dr M Madhu
Director ICAR-IISWC, Dehradun

We are pleased to organise Training Programme on AI & Machine Learning Applications in Natural Resource Management. I cordially invite interested participants to explore the potential of the new technologies for serving better in NRM.

Important Dates
- Last Date for Application: September 29, 2023 (up to 5:00 pm)
- Commencement of Training: October 03, 2023
- Conclusion of Training: October 07, 2023

Programme Fees
- No Course fee for the participation
- Participants have to bear the cost of boarding and lodging charges except working lunch

Targeted Participants
The program is designed to benefit early and mid-career researchers, particularly scientists from ICAR's NRM institutes

How to Apply
- A maximum of 30 participants will be admitted in the program. Early applicants will have greater chance of being selected and preference will be given to those who have relevant knowledge to the scope of the training
- The interested scientists may get sponsored from their respective institute

Training Objectives
- To provide comprehensive understanding about AI and ML tools and techniques
- To enhance knowledge and skills to apply AI and ML technologies for natural resource management
- To promote collaboration and knowledge sharing among participants

Expected Learning Outcomes
- Improve decision-making in natural resource management particularly in soil and water conservation and watershed management
- Understanding potential of AI and ML to process vast amounts of data and provide accurate predictions and recommendations
- Capacity building to integrate AI and ML to address real-world problems

Requirement from the Participants
- Laptop with at least 4 GB RAM
- Participants are required to have prior knowledge and understanding of common terminologies and concepts in the fields of natural resource management (soil and water)
- They should also have basic programming skills and proficiency in using data analysis tools

ICAR-Indian Institute of Soil and Water Conservation (ICAR-IISWC), Dehradun
http://www.cswcrtiweb.org/

Potential Impact
- Training in the field of AI and ML has the potential to revolutionize natural resource management.
- Adoption of these technologies can improve efficiency, accuracy, and cost-effectiveness of current conservation practices, leading to more productive and sustainable agricultural practices and healthier watersheds.

Key Contents of the Training Programme
- Basics of Artificial Intelligence (AI) and Machine Learning (ML)
- AI applications in daily life
- Basics of open source AI & ML software and practical exploration
- Collaborative AI Tools for NRM Scientists
- Machine learning and data analytics
- Hands on practical and group assignments
- Application of Fuzzy logic and neural networks for engineering applications
- ML and Deep learning (DL) for Geospatial data: Approaches and Applications
- AI application in crop classification and yield prediction
- Use of DL for semantic segmentation of LiDAR point cloud
- Developing recommendation systems using AI & ML to improve agricultural planning
- Lean & continual Improvement: Attributes and techniques for enhancement of work output
- Future of Artificial intelligence in perspective of predictive and adaptive AI

Resource Persons

Key Resource Person
Prof Abhay Saxena, Dean
School of TCM, DSVV, Haridwar

Dr Shrwan Ram
Head & Prof Computer Science & Engineering
MBM University, Jodhpur

Er Sunita Kothari, B.E., M.Tech IIT Delhi
Consultant, Mentor and Trainer
Ex AVP HeadStrong Genpact

Dr Kamal Pandey
ISRO-IIRS
Dehradun

Dr Vaibhav Kumar
Indian Institute of Science Education and Research
Bhopal

Dr Varun Singh
Department of Civil Engineering
MNNIT Allahabad, Prayagraj

Prof Sudhanshu Joshi
Associate Professor
Doon University

Prof Ashutosh K. Bhatt
Associate Professor
UoU, Haldwani

Dr Naveen Pandey
Assistant Professor
CS Dept DSVV, Trainer for AI

Dr Amit Ramesh Khaparde
Assistant Professor
G B Pant DSEU Okhla, New Delhi

Dr Chandrashekhar Patel
Assistant Professor
Amity University, Jaipur, Rajasthan

Organizing Team Members, ICAR-IISWC, Dehradun

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