Jawaharlal Nehru Krishi Vishwa Vidyalaya Jabalpur, Madhya Pradesh

TEN DAYS ONLINE TRAINING PROGRAM

On

FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

JAN 21-30, 2021

Organized by

NAHEP-CAAST-CSDA

COLLEGE OF AGRICULTURE ENGINEERING

JNKVV, JABALPUR, M.P. INDIA

Project Website: www.nahep-jnkvv.org

About Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur

Jawaharlal Nehru Krishi Vishwavidyalaya established on October 2, 1964, is a forerunner university located in Jabalpur, Madhya Pradesh. The university is awarded Sardar Ballabh Bhai Patel Outstanding University Award for the year 2018 by the Indian Council of Agricultural Research, New Delhi. The university has various constituent colleges, Agricultural Research Stations, and Krishi Vigyan Kendra's. The University offers Bachelor's, Master's, and Doctoral degrees in the Faculty of Agriculture and the Faculty of Agricultural Engineering. The University also offers diploma courses of two years in "Seed Production" and "Nursery Management" at Horticulture Vocational Education Institute, Garhakota, Sagar, MP.

About NAHEP

NAHEP is designed to strengthen the national agricultural education system in India with overall objective to provide more relevant and high quality education to agricultural university students. This programme has been promoting efficiency and competiveness through changes in working mechanism of agricultural universities, raising the teaching and research standards through improved research and teaching infrastructure and enhanced faculty competency and commitments, and making agricultural education more attractive to talented students.

There are four key components under NAHEP, namely; Institutional Development Plan (IDP), Centers for Advanced Agricultural Sciences and Technology (CAAST), ICAR to support excellence in agricultural universities (AUs), and ICAR Innovation Grants to AUs.

Skill Development to use Spatial Data for Natural Resource Management in Agriculture

Objectives:

- To build basic capacity for using RS & GIS techniques applied for betterment of Natural Resource Management particularly in Agriculture and allied sectors.

- To identify appropriate techniques for integration of spatial and ground data to realize problems related to land, water and vegetation.

- To develop user friendly spatial data products using identified technologies for policy makers, researchers, field workers and farmers.

Chief Patron

Dr. P.K. Bisen
Hon'ble Vice-Chancellor, JNKVV, Jabalpur

Patrons

Dr. R.C.Agrawal
National Director, NAHEP, ICAR, New Delhi

Dr. Prabhat Kumar
National coordinator, NAHEP, ICAR, New Delhi

Dr. Dhirendra Khare
Dean Faculty of Agriculture

Dr. P.K. Mishra
Director Research Services

Dr. (Smt) Om Gupta
Director Extension Services

Dr. Abhishek Shukla
Director Instructions

Conveners

Dr. R. K. Nema
Dean, C.A.E, JNKVV Jabalpur & PI, NAHEP CAAST

Program Coordinator

Dr. M. K. Awasthi
Principal Scientist & Co-PI, NAHEP CAAST

Online Platform: Cisco webex link will be provided to registered students only on first come first serve basis
Registered participants will
receive E-certificate

About the online training

FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

Online training on fundamental of AI & MI covers the ground from a basic concepts of AI & ML along with application part through real world scenarios. Live mentorship from the subject matter expert having in-depth knowledge of the relevant field. Access to shared resources, helpful in learning and practicing machine learning. Recording that can be viewed anytime.

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Participants

Students of Master & Ph.D. Degree /Faculty/Researchers from SAUs/UGC recognized Institutes, Central Universities can participate in this online training program. This training program will help students/ faculty to learn and apply Artificial Intelligence and Machine Learning Technologies for their research purpose.

Registration Link: For free online registration log on-
htpp://bit.ly/3oIANug
Please note:
 Attendance of participants will be monitored for all the training sessions. 75% of the training attendance & 50% presence per attended session will be necessary or eligibility of certificate.

Capacity Building Program
Fundamentals of Artificial Intelligence & Machine Learning

Day 1: Introduction to AI and ML

1. Need of AI and ML
2. History and where we stand today
3. Principles, techniques and Types of ML
4. Aim of the course, how to reach there
5. Advantages and applications of ML
6. Supervised vs Unsupervised learning

Day 2: Neural Networks and Human Brain

1. Introduction to neural nets - global function approximators
2. How to design a neuron, a layer of neuron, a neural net
3. How neural network works - forward and back propagation
4. Loss function and Vectorization of neural nets
5. Regularization and hyper parameter tuning

Day 3: Deep Learning - CNN

1. Introduction to Deep Learning
2. Flavors of neural networks
3. Kernels, convolutions and basics of CNN
4. Image processing using CNNs

Day 4: Deep Learning - RNN

1. Need of RNN in image processing
2. Introduction to Memory cell and RNN
3. Various gates of LSTM cell
4. Different architectures of RNN

Day 5: MNIST Project - NN

1. Working with images
2. Training a Neural Network
3. Tuning Hyper parameters and architecture of NN
4. Using Pre trained models - RL
5. Training on Cloud

Day 6 and 7: Project-1

Day 8 and 9: Project-2

Day 10: Deployment