MARATHWADA MITRA MANDAL'S
COLLEGE OF COMMERCE
Affiliated to Savitribai Phule Pune University, Re-Accredited by NAAC with "A" Grade
ISO 9001:2015 Certified, Awarded as Best College by Savitribai Phule Pune University
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Date:-25/08/2024

IIRS ISRO Nodal Center

Report on
The Certificate Course on "Artificial Intelligence (AI) / Machine Learning (ML)
for Geodata Analysis"
Duration: 19th August 2024 to 23rd August 2024
Mode: Online

The "Artificial Intelligence (AI) / Machine Learning (ML) for Geodata Analysis" certificate course was conducted by the IIRS ISRO Nodal Center MMCC from 19th August to 23rd August 2024. This online course aimed to equip participants with an understanding of the application of AI and ML techniques in the field of geospatial data analysis. The course emphasized how these advanced technologies can be utilized for processing and analyzing geospatial data for various applications, including natural resource management, urban planning, and environmental monitoring.

Course Overview:

The course covered key concepts and methodologies in Artificial Intelligence and Machine Learning, tailored specifically for geospatial data analysis. The curriculum provided insights into integrating AI/ML algorithms with geospatial technologies such as GIS (Geographic Information Systems) and remote sensing data.

Key topics covered in the course included:

1. Introduction to Artificial Intelligence and Machine Learning: Basics of AI and ML, their types, and applications in geospatial data analysis.

2. Data Preprocessing: Techniques for cleaning, transforming, and preparing geospatial data for AI/ML models.
3. Supervised and Unsupervised Learning: Approaches to model building using labeled and unlabeled geospatial datasets.
4. Deep Learning in Geospatial Data Analysis: Overview of neural networks and deep learning algorithms and their use in geospatial applications.
5. Geospatial Data Integration with AI/ML: Methods to integrate remote sensing data, satellite imagery, and GIS data with machine learning algorithms.
6. Practical Applications of AI/ML in Geospatial Science: Real-world case studies and applications in various fields such as agriculture, disaster management, and urban planning.

A total of 20 participants enrolled in the course. These participants were keen to enhance their understanding of AI/ML techniques and explore their applications in the geospatial domain.

Course Delivery and Learning Environment:

The course was delivered through online sessions, utilizing interactive platforms provided by IIRS ISRO for seamless learning. It included:

- Live Lectures: Delivered by experts in AI, ML, and geospatial sciences.
- Hands-On Sessions: Practical training on AI/ML algorithms using geospatial data and software tools.
- Assignments and Quizzes: Regular assessments to ensure comprehension and application of course content.

The online format provided flexibility, allowing participants to learn at their own pace while benefiting from expert guidance and interactive learning sessions.

Course Outcomes:

By the end of the course, participants gained valuable knowledge and skills in applying AI and ML techniques to geospatial data. They learned how to preprocess and analyze geospatial datasets using machine learning models, enhancing their capabilities in the use of advanced technologies for spatial data analysis.

All participants successfully completed the course and were awarded a certificate issued by IIRS ISRO, marking their achievement in mastering AI/ML for geospatial analysis.

Feedback:

Participants provided positive feedback, highlighting the relevance of the course content and the practical applications of AI and ML in the geospatial domain. The interactive sessions and hands-on experience were particularly appreciated as they enabled participants to directly apply what they learned to real-world scenarios.

Conclusion:

The certificate course on "Artificial Intelligence (AI) / Machine Learning (ML) for Geodata Analysis" conducted by IIRS ISRO Nodal Center MMCC was a highly successful initiative that equipped participants with critical skills in applying AI and ML for analyzing geospatial data. The course provided a comprehensive introduction to cutting-edge technologies, enhancing participants' ability to solve complex geospatial problems with advanced data analysis techniques. The certification from IIRS ISRO adds significant value to the professional qualifications of the participants, preparing them for future advancements in geospatial and data science fields.

Acknowledgements:

We would like to extend our sincere thanks to IIRS ISRO for organizing this course, as well as the course instructors for their expertise and guidance. Special thanks to the participants for their active engagement and enthusiasm throughout the course.

Dr.Sandip Anpat   Dr. Devidas Golhar
Coordinator, IIRS ISRO Nodal Center   Principal

भारतीय सुदूर संवेदन संस्थान/ **INDIAN INSTITUTE OF REMOTE SENSING**

भारतीय अंतरिक्ष अनुसंधान संगठन/ **INDIAN SPACE RESEARCH ORGANISATION**

अंतरिक्ष विभाग, भारत सरकार/ **DEPARTMENT OF SPACE, GOVERNMENT OF INDIA**

COR202414413975

बहि: परिसर संपर्क/ विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

संस्थान की सहभागिता का प्रमाण पत्र
CERTIFICATE OF PARTICIPATION OF INSTITUTE

यह प्रमाणित किया जाता है कि **मराठवाडा मित्रा मण्डल कॉलेज ऑफ कॉमर्स, डेक्कन जिमखाना, पुणे** ने भारतीय सुदूर संवेदन संस्थान, इसरो देहारादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम **जियोडेटा विश्लेषण के लिए एआई/एमएल का प्रयोग** मे भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 2024-08-19 से 2024-08-23 तक किया गया ।

This is to certify that **Marathwada Mitra Mandal`s College of Commerce, Deccan Gymkhana, Pune**, has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehardun on **AI/ML for Geodata Analysis**. This online programme was conducted during August 19, 2024 to August 23, 2024

दिनाँक/ Date: **09-09-2024**

देहरादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

भारतीय सुदूर संवेदन संस्थान/ **INDIAN INSTITUTE OF REMOTE SENSING**

भारतीय अंतरिक्ष अनुसंधान संगठन/ **INDIAN SPACE RESEARCH ORGANISATION**

अंतरिक्ष विभाग, भारत सरकार/ **DEPARTMENT OF SPACE, GOVERNMENT OF INDIA**

ऑनलाइन दूरस्थ अधिगम कार्यक्रम
ONLINE DISTANCE LEARNING PROGRAMME

COR202414413975

समन्वय का प्रमाणपत्र
CERTIFICATE OF COORDINATION

यह प्रमाणित किया जाता है कि **मराठवाडा मित्रा मण्डल कॉलेज ऑफ कॉमर्स, डेक्कन जिमखाना, पुणे** कार्यरत **??? संदीप एम. अनपत**, ने **जियोडेटा विश्लेषण के लिए एआई/एमएल का प्रयोग** विषय पर इस संस्थान द्वारा दिनांक 2024-08-19 से 2024-08-23 तक संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम को समन्वित किया।

This is to certify that **DR. SANDIP M. ANPAT**, working with **Marathwada Mitra Mandal`s College of Commerce, Deccan Gymkhana, Pune,** has coordinated the online training course on **AI/ML for Geodata Analysis** conducted by this institute during August 19, 2024 to August 23, 2024

दिनाँक/ Date: **09-09-2024**

देहरादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

नामांकन सं. / Enrolment No. : 20241442568971

CERTIFICATE OF ATTENDANCE
ONLINE COURSE

यह प्रमाणपत्र

MR. TANISH SURESH DHENDE

को **" जियोडेटा विश्लेषण के लिए एआई/एमएल का प्रयोग "**

में ऑनलाइन पाठयक्रम पूर्ण करने पर प्रदान किया जाता है।

इस ऑनलाइन पाठयक्रम का आयोजन 2024-08-19 से 2024-08-23 (कुल पाठयक्रम की अवधि = 7 घंटे 30 मिनट) के दौरान किया गया।

(संबन्धित आई.आई.आर.एस नोडल केंद्र- मराठवाडा मित्रा मण्डल कॉलेज ऑफ कॉमर्स, डेक्कन जिमखाना, पुणे)

THIS CERTIFICATE IS

AWARDED TO

MR. TANISH SURESH DHENDE

ON COMPLETION OF THE ONLINE COURSE ON

"AI/ML for Geodata Analysis"

THIS ONLINE COURSE WAS CONDUCTED DURING **19 August 2024 to 23 August 2024** (Total course duration = 7 hrs& 30 minutes).

(Concerned IIRS Nodal Centre- **Marathwada Mitra Mandal`s College of Commerce, Deccan Gymkhana, Pune**)

Attendance: **100 %**

Date: **11-09-2024**

Place: Dehradun

समन्वयक, विश्वविद्यालय/संस्थान
Coordinator, University/ Institution

निदेशक/ Director
आई.आई.आर.एस, देहरादून/ IIRS, Dehradun

UID: b8c308f324624d2d63347f088fc9ba39 .This Certificate can be validated using URL- https://certificate.iirs.gov.in

नामांकन सं. / Enrolment No. : 20241442568878

CERTIFICATE OF ATTENDANCE
ONLINE COURSE

यह प्रमाणपत्र

MR. MANAS RAJESH DESAI

को " जियोडेटा विश्लेषण के लिए एआई/एमएल का प्रयोग "

में ऑनलाइन पाठ्यक्रम पूर्ण करने पर प्रदान किया जाता है ।

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UID- ba8fe9c83faeb14453270cda815b5d85 .This Certificate can be validated using URL- https://certificate.iirs.gov.in

नामांकन सं. / Enrolment No. : 20241442519935

CERTIFICATE OF ATTENDANCE
ONLINE COURSE

यह प्रमाणपत्र

MR. OMKAR DHANVE

को " जियोडेटा विश्लेषण के लिए एआई/एमएल का प्रयोग "

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