Reg	istra	atio	<u>n fo</u>	rm

Name:\_\_\_\_\_

Designation:\_\_\_\_\_

Institution &Department:\_\_\_\_\_

Address:	
Qualifications:	
Experience in years:	Teaching:
	Research:
Age:	Sex: Male/Female
Telephone No	
Email:	

Signature of the
Candidate

Signature of the Head of the Institution

#### Please register @:

Note:

- **\*** Registration is free for IEEE members and includes participation certificate, high tea.
- Attendance is mandatory for all the sessions to get the participation certificate

#### Address for Communication: Dr. S. Vasavi Professor & Head AI&DS Mobile – 9441063106

Registration starts at 9:00 AM on 25<sup>th</sup> Sep , 2023

#### **Chief Patron**

**Sri Ch. Nageswara Rao,** President, Siddhartha Academy of General & Technical Education (SAGTE)

## **Patrons**

Sri P. Lakshmana Rao, Secretary, (SAGTE)
Sri M. Rajaiah, Vice-President, Siddhartha Academy of General& Technical Education (SAGTE) and Convener,
V R Siddhartha Engineering College

## **College Advisory Committee**

Dr A V Ratna Prasad, Principal Dr B Panduranga Rao, Dean, Student Affairs Dr MVS Raju, Dean, R&D Dr Ch Srinivas, Dean, Industry Relations Dr N.Vijaya Sai, Dean, Academics

# **Co-Ordinators**

Dr. D. Rajeswara Rao Professor & Head, Department of CSE Dr. S. Vasavi Professor & Head AI&DS Email: <u>vasavi\_movva@vrsiddhartha.ac.in</u> Mr N. Sunny Asst Professor, Dept of CSE Email: sunny@vrsiddhartha.ac.in

# Department of CSE and AI&DS

FOURTH SERIES OF "ARTIFICIAL INTELLIGENCE IN REMOTE SENSING APPLICATIONS"

A ONE WEEK SEASONAL SCHOOL ON "Explainable Artificial Intelligence in Remotely Sensed Data: A Review of Applications & Current Research"

25<sup>th</sup> to 30<sup>th</sup> September 2023



In Collaboration with ISRO & IEEE GRSS Student Chapter

Velagapudi Ramakrishna Siddhartha Engineering College Vijayawada-520007 Andhra Pradesh www.vrsiddhartha.ac.in

#### **About the College:**

Velagapudi Ramakrishna Siddhartha Engineering College, (Estd.1977) Vijayawada, Andhra Pradesh sponsored by Siddhartha Academy of General and Technical Education, the 1st private self-financing engineering college in the composite state of Andhra Pradesh. The college has been in Autonomous status granted by UGC since 2006. All the UG programmes & eligible 5 PG programmes offered by the college were accredited by NBA in Outcome Based Education format under Tier – I approved by Washington Accord. Only private institute in A.P. selected for MARGADARSHAN scheme by AICTE to share & Mentor institutions in the region for quality up gradation & accreditation of programs.

The College has been ranked among the top 200 engineering institutions by NIRF for the last 4 consecutive years. Only self-financing institution in A.P recognized as Band-Excellent Institution under ARIIA (Atal Ranking of Institutions on Innovation achievements) by MHRD. The college is also accredited by NAAC with 'A+' grade, and also certified by "ISO – 21001:2018. Ours is one of the TEQIP institutions in the country awarded with a World Bank grant by MHRD, Govt. of India.

#### **About CSE Department:**

Established in the year 1985, the department of CSE offers B.Tech programme in Computer Science and Engineering, Artificial Intelligence & Data Science, Artificial Intelligence & Machine Learning and one M.Tech Programme in Computer Science and Engineering. The department has executed various funded research projects worth of nearly One Crore Rupees granted by AICTE, UGC, ISRO and DST. The highest package received in the last academic is 46 LPA. The average CTC of placed students is around 6 Lakhs.

#### introduction:

Remote sensing is the technology of acquiring information about the Earth's surface without actually being in contact with it. Remote sensing bodies such as NRSC, ESA observes Earth and other planetary bodies via remote sensors on satellites and aircraft that detect and record reflected or emitted energy. With time, the latest research and collected data, Artificial Intelligence and Machine Learning handle the challenges to analyze Big and voluminous data. The intersection of Artificial Intelligence, machine learning, deep learning and GIS is creating massive opportunities that were not possible before. The current data-driven AI techniques when applied on remote sensing applications such as land remote sensing, terrestrial remote sensing, atmospheric remote sensing, ocean remote sensing will not disclose on which features used for the predictions and also does not explain the prediction summary. This school is the perfect venue for the participants to learn Explainable AI (XAI) techniques for remote sensing data.

Following the successful conduction in 2019, 2021 and 2022, the fourth series of school with advanced research is the perfect venue for the participants to network with ISRO and DRDO scientists in the field of Remote Sensing to enhance their research capabilities and can work on interdisciplinary research.

#### **Objectives:**

- To enable the Faculty of Technical Education to learn fundamentals of Remote Sensing and Image Analysis
- To understand various types of explainability methods such as: intrinsic versus post-hoc, model-specific versus model agnostic, and global versus local explanations

- explainable ML methods that should be applied in the field of Earth Observation.
- Exposure to case studies in Remote Sensing that signifies alignment amongst the challenges to analyze big and voluminous data.
- To provide the participants with experiential learning so as to write Explainable Artificial Intelligence (XAI) methods for the emerging applications of Remote Sensing

#### **Resource Persons:**

 Smt. Geeta Varadan, Former Director, ADRIN,ISRO, Former Satish Dhavan Professor, ISRO, Bangalore,
 Mr Nilesh Desai, Distinguished Scientist, Director, Space Application Center, ISRO, Ahmadabad
 Dr. Rajeev Jaiswal, Dy. Director (U&E), EDPO Programme Office, ISRO Head Quarters, Bangalore
 Dr. K.Venugopala Rao, Scientist G (Retd), Group Director Urban studies NRSC, ISRO

5. Dr. P V Radhadevi, Outstanding Scientist & Director, ADRIN, Department of Space, Hyderabad

6. Dr SC Jayanthi, Scientist SG, Group Head, Urban Studies and Applications (USAG), National Remote Sensing Centre (NRSC)

7. Dr. C. Sudhakar Reddy, Scientist SG and Head, Forest Biodiversity and Ecology Division, NRSC, Hyderabad
8. Dr. Girish Pujar Sci/Engr. SG, Rural Development & Watershed Monitoring, RSA, NRSC, ISRO, Hyderabad
9. Dr Arijit Roy, Scientist SG & Head, IIRS, ISRO, Dehradun

10. Ms J.Kamini, Sci/Eng. SF HEAD, Urban Studies DIV. NRSC, ISRO, Hyderabad

11. Ms. Reedhi Shukla, Scientist/Engineer 'SE', Urban Studies Division, NRSC, ISRO, Hyderabad.

12. Dr N.Srinivas, Scientist D, INCOIS, Hyderabad

13. Prof Mousmi Ajay Chaurasia, Vice Chairman, IEEE Hyderabad section

#### **Target Audience:**

Faculty & Students of all disciplines.