"Faculty Development Programme"

on

Intelligent and autonomous IoT Systems with Deep Learning for Smart Agriculture and Real-Time Applications

Jointly organized
by
AICTE Training and Learning (ATAL) Academy Programmes
&
Department of CSE, KITSW

16-21 Nov, 2026

Registration Form

Name:_____

Designation:_____

College:_____
_____

Branch:_____

Address:_____
_____
_____

WhatsApp Mobile No_____

E-Mail:_____

Category: Academic / Industry / Others

Signature of the Participant:

Date:_____ Place: _____

Participants need to register through AICTE provided Link as mentioned below:

Registration Link

https://atalacademy.aicte.gov.in

ELIGIBILITY & REGISTRATION: No registration fee

The FDP is interdisciplinary and is open to all the faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry (Bureaucrats/Technicians/Participants from Industry etc.).

HOW TO APPLY Registration is required for participating in this course. Applicants can fill the registration form only in online mode available at https://atalacademy.aicte.gov.in/login

MODE OF CONDUCTION: Offline Mode

Offline sessions will be conducted in the host campus Kakatiya Institute of Technology and Science. Since Hands on sessions will be conducted, all the participants are informed to attend all the sessions without fail.

CERTIFICATION:

An Online Test will be conducted at the end of the program. The certificates shall be issued to those participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test.

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Prof & Head, Dept. of CSE

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Principle Investigator : Dr.P Niranjan

Professor & Head, Dept. of CSE

Organized by

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Kakatiya Institute of Technology & Science, Warangal

(An Autonomous Institute under Kakatiya University)

(Accredited by NAAC with 'A' Grade)

Opp: Yerragattu Gutta, Hasanparthy (M), Warangal-506015 (TS), INDIA.

Check more details on:

https://www.kitsw.ac.in/csfw-fdps.html

ABOUT THE INSTITUTE

Kakatiya Institute of Technology and Science, Warangal *popularly known as* ***KITSW****, was established in* ***1980*** *by* ***Ekasila Educational Society (EES), Warangal,*** *a philanthropic society, with a primary objective of providing quality technical education. KITSW is recognized by the AICTE and also under section 2(F) and 12(B) of UGC act 1956. The UGC has granted autonomous status in 2014 under Kakatiya University (KU), Warangal. It is accredited by NAAC with A grade (CGPA: 3.21) and all the UG engineering programmes are accredited by NBA, New Delhi. KITSW is Located in 68 acres of lush green sprawling campus, it is one of the premier institutes of Telangana. Over the years, it has attracted academicians of proven competence onto its faculty, augmented the infrastructural facilities, modernized laboratories, placed its products in reputed organizations all over the world and thus received recognition in industry and academia. At present, it is offering UG in nine branches of engineering, PG in six engineering specializations and MBA. The KU recognized CE, ME, E&I and CSE departments as research centers for PhD programmes. The faculty at KITSW is now integrating research, innovation and incubation culture into course teaching to prepare students to gain tech skills for industry 4.0. The institute is located on Warangal - Karimnagar highway.*

ABOUT DEPARTMENT OF CSE :

The Department of CSE was established in the year 1994 with an intake of 60, increased to 120 in 2004 and again increased to 180 in 2015. Recently in the year 2025 the B.Tech-CSE intake increased to 360. The department also offers one PG course M.Tech with Software Engineering specialization. The department is recognized as research center by Kakatiya University in the year 2006. Department is maintaining well experienced faculty as per norms out of them 15 faculty members with doctoral degree and many of the faculty members are in the pursuit of their Ph.D. The department has produced many under graduate, post graduate students and Ph.D. scholars who have settled in most prestigious organizations around the globe. The department has strong industry interaction to update the syllabi of the courses and to modernize laboratories for reflecting the rapid changes in technologies. The department has extensive fabrication, calibration and testing facilities for carrying out industry sponsored research and consultancy projects.

The Department has the distinction of being awarded accreditation by the National Board of Accreditation (NBA), New Delhi for five times consecutively in years 2003, 2008, 2014, 2018, 2020 and 2023. The latest NBA accreditation status of the department is active for 2 years w.e.f. 2023. The department enriched with two centers of excellence where the first one is BoT laboratory sponsored by Automation University, Bangalore and the second one is CISCO laboratory sponsored by TASK, Hyderabad. At center of excellences the interfaced to advanced technologies and working environment in concern areas of specializations. The department undersigned MOUs with several MNC's including TCS, Microsoft-Hyderabad, Oracle Academy, Infosys, Wipro and Cyient for providing best carrier opportunities and industrial exposure to students.

AICTE Training and Learning (ATAL) Academy:

AICTE Training and Learning (ATAL) Academy is established to empower faculty to achieve goals of Higher Education such as access, equity and quality. AICTE is committed for development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development e.g. SWAYAM, MOOCs, Start-up Initiatives, Prime Minister Kaushal VikasYojana, Sansad Adarsh Gram Yojana (SAGY), Swachh Bharat/ Unnat Bharat Abhiyan, Yoga Activities etc. Council understand that there is a need of the day to train the young generation in skill sector and having faculty & technicians to be trained in their respective disciplines.

About Faculty Development Programme:

This FDP is suitable for faculty, researchers, postgraduate scholars in academia and industry. The aim of this 6-day FDP is to provide a hands-on IoT architecture and its applications in agriculture domain. The FDP also offers Hands-on Sessions and Case Studies using IoT Tools: Implementing IoT architecture tools include hardware prototyping boards (Arduino, Raspberry Pi), cloud platforms (AWS IoT, Azure IoT Hub), connectivity protocols (MQTT, CoAP), and data visualization tools (Grafana, ThingsBoard)..

The objective of the FDP is to contribute

- ✓ *To provide detailed knowledge on IoT sensors and architectures to integrate with a deep learning model for real-time farming applications.*
- ✓ *To enable participants to design real-time intelligent agriculture systems using low-computing devices (ESP32, Edge AI)*
- ✓ *To explore deep learning lightweight LLM models for decision making in Low computing devices.*
- ✓ *To gain hands-on experience in smart agriculture applications such as soil monitoring, crop health analysis, crop disease prediction and process automation.*
- ✓ *To develop hands-on skills in sensor integration, data acquisition, and AI model deployment.*

Benefits and Outcomes of the FDP:

After completion of this fdp participant able to

- ✓ *Design and implement IoT-based intelligent and autonomous systems for real-world applications in agriculture domain.*
- ✓ *Develop and analyze deep learning models for low computing devices in agriculture domain.*
- ✓ *Deploy AI models on edge devices such as ESP32-CAM and Raspberry Pi for object recognition.*
- ✓ *Apply IoT + AI solutions in smart agriculture, healthcare, and smart cities.*

Major Course Contents:

- ✓ *Fundamentals of IoT and Embedded Systems: IoT architecture, communication protocols, sensors, actuators, and embedded platforms (Arduino, ESP32, Raspberry Pi).*
- ✓ *Machine Learning and Deep Learning Techniques: Core concepts of ML/DL, CNN-based image processing, model training, and performance evaluation using Python frameworks.*
- ✓ *Integration of IoT with AI (Edge Intelligence): Deployment of deep learning models on edge devices, real-time data processing, and IoT-AI system design.*
- ✓ *Applications in Smart Agriculture and Real-Time Systems: Precision farming, smart irrigation, crop monitoring, and automation using IoT and deep learning.*
- ✓ *Cloud IoT, Research Trends, and Hands-on Implementation: IoT cloud platforms, data analytics, security, recent research advancements, and practical lab sessions for prototype development.*

Important Dates:

Course Duration: 16-11-2026 to 21-11-2026

Resource Persons

Eminent faculty from IITs/ NITs / Industry experts

Address for Communication

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