



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by **AICTE** ♦ **ISO 21001:2018 Certified**
Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.
Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in
Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Department Name : ECE

Event Date(s) : 07-08, March 2023

Event Time : Two Days 9 am - 5pm

Event Name : Workshop on "SMART AGRICULTURE ROBOT

Event Category : Professional Society IEEE WIE Society

Event Objective : The role and responsibilities of IEEE Societies in the development of the engineering and technology community worldwide. This workshop aims to provide a platform for Students and researchers to learn about state-of-the-art technologies in the areas of Robotics and Automation toward Smart Agriculture. It provides hands-on experience from expert members from Industries and reputed institutes to disseminate their knowledge and experience for the participants to work in years to come, which will also be useful for the development of the skill sets.

Event Venue / Room No. : R004

Faculty Coordinator EMP.ID : 5616

Faculty Coordinator Name : Dr. S. Arunmetha, Associate Professor, ECE

Faculty Coordinator Email-ID : sarunmetha@kluniversity.in

Student Organizers : SAHITHA MEDASANI

The IEEE Robotics and Automation Society sponsored a hands-on workshop on Smart Agriculture Robot utilizing NodeMCU microcontroller aimed to provide participants with practical skills and knowledge in building and programming robotic systems tailored for agricultural applications. The workshop combined theoretical insights with hands-on sessions to empower attendees to develop and deploy smart agricultural robots using NodeMCU, a widely-used microcontroller platform.

Key Themes and Practical Sessions:

Introduction to Smart Agriculture Robotics: The workshop commenced with an overview of the role of robotics in modern agriculture, highlighting the potential benefits and challenges associated with implementing robotic solutions. Participants gained insights into the various tasks and operations that agricultural robots can assist with, such as planting, monitoring, and harvesting.

NodeMCU Microcontroller Basics: Hands-on sessions provided participants with a comprehensive understanding of NodeMCU microcontroller architecture, programming environment, and connectivity options. Through guided exercises, attendees learned how to set up and configure NodeMCU boards, write code using the Arduino IDE, and interface with sensors and actuators commonly used in agricultural robotics.

Sensor Integration and Data Acquisition: Practical sessions focused on integrating sensors for environmental monitoring, including temperature, humidity, soil moisture, and light sensors. Participants learned how to interface these sensors with NodeMCU, collect real-time data from the agricultural environment, and visualize the data using serial communication or web-based dashboards.

Actuator Control and Automation: Attendees gained hands-on experience in controlling actuators such as motors and servos to perform agricultural tasks autonomously. Through interactive demonstrations and guided exercises, participants learned how to program NodeMCU to actuate robotic mechanisms for tasks such as irrigation, seed dispensing, and crop harvesting.

Wireless Communication and Remote Monitoring: The workshop explored techniques for establishing wireless communication between agricultural robots and remote monitoring systems. Participants learned how to utilize Wi-Fi capabilities of NodeMCU to transmit sensor data to cloud platforms or mobile devices, enabling real-time monitoring and control of robotic operations from anywhere.

Project Showcase and Discussion:

The workshop culminated in a project showcase session where participants presented their prototypes and solutions developed during the hands-on sessions. Attendees had the opportunity to discuss their learnings,

challenges faced, and potential enhancements for future iterations of their smart agriculture robots. The interactive discussion fostered knowledge sharing and collaboration among participants.

The IEEE Robotics and Automation Society sponsored hands-on workshop on Smart Agriculture Robot using NodeMCU microcontroller provided participants with a practical learning experience in developing robotic solutions for agricultural applications. By combining theoretical knowledge with hands-on exercises, the workshop equipped attendees with the skills and confidence to innovate and contribute to the advancement of smart agriculture robotics.

The organizers extend their appreciation to all participants, instructors, volunteers, and sponsors for their valuable contributions in making the workshop a success. Special thanks to the IEEE Robotics and Automation Society for their support in organizing and sponsoring the event.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified
Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.
Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in
Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122. 2576129



KL IEEE
STUDENT BRANCH



IEEE Hyderabad Section



IEEE ROBOTICS AND AUTOMATION SOCIETY SPONSORED

WORKSHOP ON "SMART AGRICULTURE ROBOT"

March 7th -8th 2023

OBJECTIVE OF THE PROGRAM

The role and responsibilities of IEEE Societies in the development of the engineering and technology community worldwide. This workshop aims to provide a platform for Students and researchers to learn about state-of-the-art technologies in the areas of Robotics and Automation toward Smart Agriculture. It provides hands-on experience from expert members from Industries and reputed institutes to disseminate their knowledge and experience for the participants to work in years to come, which will also be useful for the development of the skill sets.

CONTENT OF WORKSHOPS TO BE COVERED

- Introduction to Robotics, Agriculture robots, TRL levels.
- Introduction Esp32 & Serial communication.
- Assembly of Smart Agriculture Robot.
- Interfacing of LED&LDR.
- Interface of DC motor.
- Interface of Ultrasonic Sensor.
- Interface of Soil Moisture Sensor.
- Interface of Servo Motor.
- Bluetooth interface to control Robot.
- Developing Android app using MIT app Development to control Robot.
- Developing Webpage to control Robot.
- IoT with Things speak.
- Uploading data into the cloud.
- Sending and Receiving Messages.

REGISTRATION AND PARTICIPATION DETAILS

Registration Fee (Includes Working lunch & High Tea):

IEEE RAS Members	₹ 240
IEEE Members	₹ 320
Non-IEEE members	₹ 400

Bank Account Details :

Account Number : 62162868914

Account Name : IEEE STUDENT BRANCH KLEF

Bank Name : STATE BANK OF INDIA ; Branch : K L University, VADDESWAREM

IFSC Code: SBIN0021361

PROGRAM CHAIRS

Dr. Sudharsan Jayabalan

Chair, IEEE Robotics & Automation Society Chapter, Hyderabad

Dr. B. Jaya Kumar Singh

Dean Research & Development, KLEF

Dr. Srinath A

Dean Skill Development, KLEF

Dr. Ch. Hanumantha Rao

Dean Student Affairs, KLEF

Mr. Hari Kiran Vege

Additional Dean-Academics, KLEF

Dr. Rama Krishna Rao T. K.

Principal, College of Engineering, KLEF

Dr. Suman Maloji

Professor & HoD, ECE, KLEF

Dr. T. Pavan Kumar

Professor & HoD, CSE (R), KLEF

Dr. Senthil Athithan

Professor & HoD, CSE (H), KLEF

Dr. P. Senthil Murugan

HoD, Agriculture, KLEF

Dr. S. Arunmetha

Associate Professor, ECE & IEEE SB Counselor, KLEF

Registration Form:

<https://forms.gle/taEetQeGiGv6Xsmz7>



Organized by

IEEE Robotics and Automation Society Hyderabad Section Chapter

Jointly Organized by

Koneru Lakshmaiah Education Foundation
IEEE Student Branch & WIE

CONVENOR

Dr. Ruth Ramya Kalangi

Associate Professor, CSE & Faculty Advisor, CS Chapter, IEEE SB Associate Dean (Student Affairs) & Convener Women Development Cell, KLEF

CO-CONVENOR

Dr. Y. Usha Devi

Associate Professor, ECE & Faculty Advisor, WIE, IEEE SB, KLEF

Ms. Karra Sony

Assistant Professor, ECE & Co-Convenor Women Development Cell, KLEF

COORDINATORS

Dr. K. Girija Sravani, Associate Professor, ECE & Faculty Advisor, EDS, IEEE SB, KLEF

Dr. P. Vidyulatha, Associate Professor, CSE, KLEF

Ms. J. Lakshmi Prasanna, Assistant Professor, ECE

Mrs. K. Sarada, Associate Professor, EEE, KLEF

Ms. Koneru Sireesha, Assistant Professor, Mech, KLEF

Dr. Sagarika, Assistant Professor, KLCA, KLEF

For Further Correspondence

Dr. S. Arunmetha

Mobile: +91 99948 31313

E- Mail: sarunmetha@kluniversity.in

Dr. Ruth Ramya Kalangi

Mobile: +91 9440307606;

E- Mail: ramya_cse@kluniversity.in

KONERU LAKSHMAIAH EDUCATION FOUNDATION

(Deemed to be University, Estd. u/s 3 of the UGC Act, 1956)

Green Fields, Vaddeswaram, Guntur District, A.P., INDIA-522502



During Hands on Training Day-1 @ R004, R&D Block, KLEF



During Hands on Training Day-1 @ R004, R&D Block, KLEF



During Hands on Training Day-2 @ R004, R&D Block, KLEF



During Hands on Training Day-2 @ R004, R&D Block, KLEF

Workshop on "SMART AGRICULTURE ROBOT" by IEEE SB WIE, KLEF – Reg.

Registrar <registrar@kluniversity.in>

Mon 3/6/2023 4:30 PM

To:Arunmetha S <sarunmetha@kluniversity.in>

📎 1 attachments (5 MB)

SMART AGRICULTURE ROBOT _ Workshop-brochure.jpg;

Ref: KLEF/REG/SA/WDC/2022-23

Date: 06-03-2023

Orders of the Vice-Chancellor dt.06.03.2023

CIRCULAR

Sub: **Workshop on "SMART AGRICULTURE ROBOT"** by IEEE SB WIE, KLEF – Reg.

Ref: Letter dated 03.03.2023 from Dr.K. Ruth Ramya, Convener, Women Development Cell, KLEF.

This is to inform all the students of KLEF that on the occasion of the International Women's Day-2023 Celebration, KLEF Women Development Cell in association with IEEE Student Branch KLEF WIE & IEEE Robotics and Automation Society Hyderabad Section Chapter is organizing the IEEE Robotics and Automation Society Sponsored Workshop on "**SMART AGRICULTURE ROBOT**" on 7th and 8th March 2023, for the students.

REGISTRATION DETAILS

Registration Fee (**Includes Two Working lunch & High Tea**):

IEEE RAS Members – ₹ 240

IEEE Members – ₹ 320

Non-IEEE members – ₹ 400

Registration Form:

<https://forms.gle/taEetQeGiGv6Xsmz7>

For Further Correspondence

Dr. Ruth Ramya Kalangi; Mobile: +91 9440307606; E- Mail: ramya_cse@kluniversity.in_

Dr. S. Arunmetha; Mobile: +91 99948 31313; E-Mail: sarunmetha@kluniversity.in_

-
All the interested students can participate in this program.

REGISTRAR (I/C)

Encl: Brochure

Mail & Hard copy to: Hon'ble President, KLEF

Mail to: Hon'ble Vice-Presidents, KLEF

Mail & Hard copy to: Hon'ble Pro Chancellor

Mail & Hard copy to: Hon'ble Vice Chancellor

Mail & Hard copy to: Hon'ble Pro Vice Chancellor (Administration)

Mail to: Advisor – NAAC & Hyderabad Operations - Prof. K.Koteswara Rao

Mail to: All Advisors / All Deans / All Principals / All Directors

Mail to: Controller of Examinations-Dr.A.S.C.S.Sastry

Mail to: Principal-Engg.College / Vice Principal / Deputy Director / Director

Mail to: Coordinator-FED.Dr.MSG Prasad

Mail & Hard copy to: HoDs.. AI&DS / BT / CE / CSE / Comp.Engg. / CS&IT / ECE / EEE / ECM / ME

HoDs..Maths / PHY / CHEM / ENG / BES-I / BES-II

HoDs..MBA / BBA / COM / HM / CSS / CA&MS / Law / Architecture / Pharmacy / CSA / Arts

Mail & Hard copy to: Head of Division..Communication Skills / Soft Skills / Quant & Reasoning

Mail to: All Dy. HoDs / All Alt. HODs

Mail to: KL H HoDs..CSE / AI&DS / ECE / Coordinator-FED

Mail to: All students

Thanks & Regards



Dr. A. Jagadeesh
REGISTRAR(I/C)

KONERU LAKSHMAIAH EDUCATION FOUNDATION

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' Grade University ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.
Phone No. 08645 - 350200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' Approved by AICTE ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Participants List:

S. No.	REG. NO	Name of the Student	Department	YEAR	Signature
1	2000629003	ANUDEEP PULAPA	Agriculture	3	P. Anudeep.
2	2000620141	SAI SREE ADI	Agriculture	3	A. Sai Sri
3	2000620209	DIMPLE SRI LASYA	Agriculture	3	D. Sri Lasya
4	2000620149	HARI PRIYA PINELLI	Agriculture	3	P. Hari Priya
5	2000620192	SK . SHAHANAZ	Agriculture	3	Shamir
6	2000620181	M.KAVYASRI	Agriculture	3	Kavyasri
7	2000620089	A.Jyothirmay sumathi	Agriculture	3	A. Jyothirmay
8	2000620083	M.MOHITH SRI MANOHHUR	Agriculture	3	M. Mohith Sri Manohur
9	2000620009	VEMURI YASHWANTH	Agriculture	3	V. Yashwanth
10	2000620087	KAMMILI BHARATH KUMAR	Agriculture	3	K. Bharath Kumar
11	2000620164	RAYALA VIVEK	Agriculture	3	R. Vivek
12	2000620010	Sai Pavan Jinkala	Agriculture	3	S. Sai Pavan
13	2000620082	SWARNA SANDHYA	Agriculture	3	Swarna Sandhya
14	2000620165	MUDRAGADDA DAYA PAUL	Agriculture	3	M. Daya Paul
15	2000620100	K LAKSHMAN SAI REDDY	Agriculture	3	K. Lakshman Sai Reddy
16	2000620130	P.SUDARSAN	Agriculture	3	P. Sudarsan
17	2000620042	CHEVULA TEJA YADAV	Agriculture	3	C. Teja Yadav
18	2000620174	K.RAVI SANKAR	Agriculture	3	K. Ravi Shankar
19	2000620135	SHAIK ABDUL RAZAK	Agriculture	3	M. R. Razak
20	2000620116	CH.VAMSI	Agriculture	3	Vamsi
21	2000620042	CH.TEJA YADAV	Agriculture	3	CH. Teja Yadav
22	2000620179	SHAIK ARIF	Agriculture	3	Arif
23	2000620169	AVULA NASAR REDDY	Agriculture	3	A. Nasar Reddy
24	2000630152	KARAPARTHI VINAY	Agriculture	3	K. Vinay



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S. No.	REG. NO	Name of the Student	Department	YEAR	Signature
25	2000620001	Hrushuk Kusam	Agriculture	3	K. Hrushuk
26	2000620017	D JOSEPH JAYANTH	Agriculture	3	D. Joseph
27	2200620045	PARUCHURI DEVI SREE	Agriculture	1	P. Devi Sree.
28	2000620159	Nikhil Satya Sai Kodali	Agriculture	3	K.N.S. Sai
29	2000620076	MANDADI MAHESHREDDY	Agriculture	3	M. Mahesh Reddy
30	2200620154	DEMULA BHAVYA SREE	Agriculture	1	V. Bhavya Sree.
31	2000620126	Pavan	Agriculture	3	Pavan
32	2200620157	PULIGOTI SRIVIDYA	Agriculture	1	P. Srividya
33	2000620176	A.NAGENDRA BABU	Agriculture	3	A. N. Babu
34	2000620044	KANKIPATI RAMA NAGA SAI VISHNU	Agriculture	3	K.R.N. Saivishnu
35	2000620178	MOUNIKA B	Agriculture	3	Mounika B
36	2000620077	SRIRAMULA MOUNIKA	Agriculture	3	S. Mounika
37	2000620086	GOUTAMI KONA	Agriculture	3	K. Gouthami
38	2000620011	MATTAKOYYA TEJA	Agriculture	3	M. Teja
39	2000620184	GOLAJAPU SUPRIYA	Agriculture	3	G. Supriya
40	2000620103	NIMMADI HARIPRIYA	Agriculture	3	N. Haripriya
41	2000620034	gopi krishna kanigiri	Agriculture	3	K. Gopi Krishna
42	2000620117	VUNGARALA VENKATA SAI SUPRIYA	Agriculture	3	V.V. Supriya Sai
43	2000620022	M. TEJASWI	Agriculture	3	M. Tejaswi
44	2000620113	Ch. Pravallika	Agriculture	3	Pravallika
45	2000620093	VUSTELA VINUTHNA	Agriculture	3	V. Vinuthna
46	2200620109	BHAVIRISETTY SAGAR	Agriculture	1	B. Sagar
47	2000620091	MOTA YENOSH	Agriculture	3	M. Yenosh
48	2000620064	VALLURI MURALI GOPALA KRISHNA	Agriculture	3	V.M.G. Krishna
49	2000620198	NUTHANSUPRIYA MADDURI	Agriculture	3	M. Nuthansupriya



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S. No.	REG. NO	Name of the Student	Department	YEAR	Signature
50	2000620061	M.ROJASWATI	Agriculture	3	M. Rojaswati
51	2000620049	N.ROHINI KEERTHI	Agriculture	3	N. Rohini Keerthi
52	2000620080	ADITHYA .KARUMOORI	Agriculture	3	Adithya
53	2000620026	SREEJA ELLINDALA	Agriculture	3	Sreeja
54	2000620065	SYAMALAPALLI PAVAN SAI	Agriculture	3	S. Pavan Sai
55	2000620145	DURGA LAKSHMI SOWMYA TEEGALA	Agriculture	3	D. L. Sowmya T.
56	2000620101	Bhargavi Banavatu	Agriculture	3	B. Banavatu
57	2200620151	DASARI NISSI FLARENCE	Agriculture	1	D. Nissi Flarence
58	2200620034	MUDRAGADA VENKATATA SRI MANI KARTHIKEYA	Agriculture	1	M. V. S. M. Karthikeya
59	2000629004	MALLU SHIVA REDDY	Agriculture	3	M. Shiva Reddy
60	2200620131	GANTEM VARNITHA	Agriculture	1	G. Varnitha
61	2000620099	AJAY KOPPULA	Agriculture	3	K. Ajay
62	2000620058	PULAVARTHI GEETHIKA	Agriculture	3	P. Geethika
63	2000620073	MOOLA VANDANA	Agriculture	3	M. Vandana
64	2000620128	KANAPARTHI HARIKA	Agriculture	3	K. Harika
65	2200620012	E SURYA BHAVANI SHANKAR	Agriculture	1	E. S. Bhavani Shankar
66	2000620036	KAPALAVAYE VIJAY	Agriculture	3	K. Vijay
67	2000620200	SANKU DIVYA SRI	Agriculture	3	S. Divya Sri
68	2000620081	KATIKA DIVYA SREE	Agriculture	3	D. Divya Sree
69	2000620111	NALLAGORLA GEETHA ARUN KRISHNA	Agriculture	3	N. G. A. Krishna
70	2000620084	KANAPARTHI SUDHEERA	Agriculture	3	K. Sudheera
71	2200080004	DEVISETTI PRUDHVI RAJ	AI & DS	1	D. Prudhvi Raj
72	2200080010	BOLLA VIJAY VARDHAN	AI & DS	1	B. Vijay vardhan
73	2200080009	MAHANTHI JYOSHNA	AI & DS	1	M. Jyoshna
74	2200080183	PATTAN MAHAMMAD SALMAN KHAN	AI & DS	1	P. M. S. Khan



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

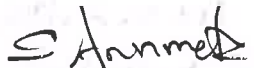
Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

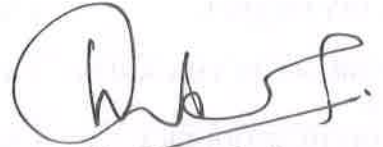
Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.


Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S. No.	REG. NO	Name of the Student	Department	YEAR	Signature
75	2200080138	ENDREDDY TEJA SAI REDDY	AI & DS	1	E. J. Sai Reddy
76	2200080003	GELLA HARSHAVARDHAN	AI&DS	1	E. Harshavardhan
77	2200080153	ARUMILLI TEJASWINI	AI&DS	1	A. Tejaswini
78	2200080182	VAJRAPU PRAVEEN	AI&DS	1	V. Praveen
79	2200080121	GOKAVARAPU VENKATESH	AI&DS	1	G. Venkatesh
80	2200080185	SUGGU SRI HARSHA	AI&DS	1	S. Sri Harsha
81	2200030820	MUSULURI CHETAN	CSE	1	M. Chetan
82	2200030495	DIRISALA PAVAN KUMAR	CSE	1	D. Pavan Kumar
83	2200030364	GORANTLA SAI SIDDARTHA	CSE	1	G. Sai Siddarth
84	2200032277	AJJARAPU GUNA VIDYA PRAVEENA	CSE	1	A. Vidya Praveena
85	2200040191	HARSHITHA. CH	ECE	1	Harshitha. Ch.


Convenor/ Co-Ordinator
Associate Professor
Department of ECE
KLEF
Green Fields, Vaddeswaram,
Guntur Dist.A.P, PIN-522 502


Professor-Incharge
Associate Professor
Department of ECE
KLEF
Green Fields, Vaddeswaram,
Guntur Dist.A.P, PIN-522 502


HOD
Dr. M. SUMAN
Professor & Head
Department of ECE
KLEF
Green Fields, Vaddeswaram,
Guntur Dist., A.P. PIN: 522 502