



**Anil Neerukonda Institute of Technology & Sciences (Autonomous)**

(Permanent Affiliation by Andhra University & Approved by AICTE  
Accredited by NBA (ECE, EEE, CSE, IT, Mech. Civil & Chemical) & NAAC)  
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Website: [www.anits.edu.in](http://www.anits.edu.in)

**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

Date: 09/09/2023

**Circular**

This is to bring to your kind notice that the Institution of Engineers (India) - Student Chapter is planned to organize a "Guest Lecture" on "**Awareness of trends in technology on Industrial Automation and HMI/SCADA**" by Department of Electrical & Electronics Engineering as per the following schedule.


All the students of 4/4 EEE are hereby informed that you have to attend in this event.

Date & Time: 11<sup>nd</sup> September, 2023

Place: EEE Dept. PSS LAB

**Speakers:** Mr. SYED JUNAID AHMED  
Mr. K.KARTIK VARMA  
Mr. G.S.V.V.V VAMSI KRISHNA

Mrs. K.Lavanya and Mr.S.Harish  
Coordinator IE (I)

  
Prof. J. Vijay Kumar  
HOD of EEE

Head of the Department  
**ELECTRICAL & ELECTRONICS ENGC**  
ANITS, Sangivalasa,  
Visakhapatnam-531 162

**Copy to:**

**All Sections of 4/4 EEE**



**DEPT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**Ref: ANITS/EEE/Office/2023-24/078**

**Date: 09-09-2023.**

To  
The Principal,  
ANITS,  
Sangivalasa,  
Visakhapatnam.

Through proper channel

**Sub:** Request to conduct a Guest lecture on “Awareness of Trends in Technology on Industrial Automation and HMI/SCADA” by Department of EEE, ANITS in association with IE (I) on 11/9/2023 for IIV/IV EEE Students-Reg.

Respected sir,

Department of EEE would like to organize a guest lecture on “Awareness of trends in technology on Industrial Automation and HMI SCADA” **in association with IE (I)** for the benefit of IV/IV EEE students to be held on 11<sup>th</sup> Sep 2023. The resource persons for the event are from Andhra University College of Engineering, AU APSSDC SIEMNS, Visakhapatnam. In this regard, kindly request you to permit for smooth conduct of the event.

**Title of the Program:** Guest lecture “Awareness of trends in technology on Industrial Automation and HMI/ SCADA”

**Date:** 11<sup>th</sup> Sep 2023

**Time:** 10:00 AM-12:00 PM


**Venue:** PSS Lab, EEE


**Resource person:** 1. SYED JUNAID AHMED  
2. K Kartik Varma  
3. G S V V Vamsi Krishna

**Requirements: -**

1. Lunch – 4

**Faculty Coordinators**

- 1) Mrs.K.Lavanya 
- 2) Mr. S.Harish

  
Prof. J. Vijaya Kumar,  
Head of the Department,

Electrical and Electronics Engineering.

Head of the Department  
**ELECTRICAL & ELECTRONICS ENGG.**  
ANITS, Sangivalasa,  
Visakhapatnam-531 162



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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

Date: 12/09/2023

**Report on Guest Lecture on “Awareness of Trends in  
Technology on Industrial Automation and HMI/  
SCADA”**

**Name of the Topic:** Guest Lecture “Awareness of trends in technology on Industrial Automation and HMI/ SCADA”

**Speaker:** Mr. SYED JUNAID AHMED  
Mr. K KARTIK VARMA  
Mr. G.S.V.V.V. VAMSI KRISHNA

**Date and Time of Webinar:** 11-09-2023

**Objectives of Webinar:**

- The objective of Guest lecture is to HMI/SCADA software runs industrial plants around the world, helping operators to make critical decisions to run machinery. Operators using new, high performance HMI/SCADA software can spend less time navigating, find critical data faster, and increase productivity.

**Outcomes of Webinar:**

The webinar gives the exposure to the students and faculty to know Awareness of trends in technology on Industrial Automation and HMI/ SCADA. HMIs enable control, management and/or visualization of device processes and can range from simple inputs on a touch display to control panels for highly complex industrial automation systems and SCADA automation allows users to: Supervise and control industrial processes both locally and remotely. Acquire, process, and record data. Interact with local machinery through HMIs (Human Machine Interfaces) and PLCs (Programmable Logic Controllers) to communicate with the SCADA system.

## Report:

This report provides an overview of the awareness and impact of technology trends on the field of Industry Automation and Human-Machine Interface/Supervisory Control and Data Acquisition (HMI/SCADA) systems which was given by SYED JUNAID AHMED, K KARTIK VARMA & G.S.V.V.V. VAMSI KRISHNA on 11<sup>th</sup> September, 2023. The industrial landscape has been significantly influenced by advancements in technology, leading to increased efficiency, productivity, and improved safety measures. This report examines key trends and their implications for these sectors.



### 1. Introduction:

Industry Automation and HMI/SCADA systems play a crucial role in managing and controlling various industrial processes. As technology evolves, the automation industry has been quick to adopt new trends, impacting the way processes are monitored and controlled.

### 2. Key Technology Trends:

a. Internet of Things (IoT): IoT has enabled the integration of devices and systems for real-time data exchange, enhancing decision-making in industry automation and HMI/SCADA.

b. Artificial Intelligence (AI) and Machine Learning: AI-driven analytics and predictive maintenance are transforming the industry, making it more efficient and cost-effective.

c. Edge Computing: Processing data at the edge allows for faster response times and reduced latency in industrial automation.

d. Cybersecurity: With the increasing connectivity of industrial systems, robust cybersecurity measures are essential to protect against cyber threats.

e. Augmented Reality (AR) and Virtual Reality (VR): AR and VR technologies have found applications in training, maintenance, and troubleshooting within the industry.

f. Cloud Computing: Cloud solutions are enabling remote monitoring and data storage, facilitating access to critical information from anywhere.

### 3. Impact on Industry Automation:

- Improved efficiency and reduced downtime due to predictive maintenance.
- Enhanced quality control and product consistency.
- Greater energy efficiency and resource optimization.
- Enhanced safety measures and risk reduction.
- Increased flexibility and scalability in production processes.

### 4. Impact on HMI/SCADA:

- More intuitive and user-friendly interfaces.
- Real-time data visualization and analytics.
- Improved remote monitoring and control.
- Integration of AR/VR for maintenance and training.
- Enhanced security protocols to protect data and systems.

### 5. Challenges and Considerations:

- Data privacy and cybersecurity concerns.
- The need for workforce training to adapt to new technologies.

- Integration with legacy systems and infrastructure.
- Ongoing maintenance and updates for technology solutions.



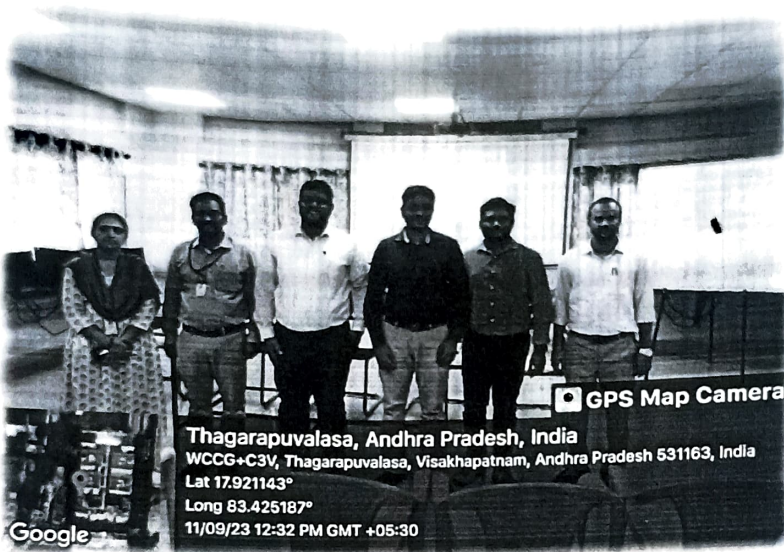
#### 6. Conclusion:

Awareness of technology trends in Industry Automation and HMI/SCADA is vital for organizations to remain competitive and efficient in today's industrial landscape. Embracing these trends can lead to increased productivity, reduced costs, and improved safety. However, organizations should also be mindful of the associated challenges and invest in cybersecurity and workforce training to fully leverage the benefits of these advancements.

#### 7. Recommendations:

- Stay updated on emerging technology trends.
- Invest in cybersecurity measures to protect critical systems and data.
- Provide ongoing training for employees to adapt to new technologies.
- Consider the potential of AI, IoT, and edge computing for process optimization.

This report provides an insight into the dynamic landscape of Industry Automation and HMI SCADA in the context of evolving technology trends. By leveraging these advancements, industries can position themselves for success in an increasingly competitive global market which was given by SYED JUNAID AHMED, K KARTIK VARMA & G.S.V.V.V. VAMSI KRISHNA. During the guest Lecture "Awareness of trends in technology on Industrial Automation and HMI SCADA."



Dr. J Vijay Kumar Prof. and HOD of EEE, delivered an Opening Remark, he highlighted the importance and relevance of the topic in the current scenario. K Lavanya, Asst. Prof. EEE concluded the session, where she briefly reviewed some of the main points of the session, she also proposed a vote of thanks to our distinguished speakers and participants. All the final year students and faculty who have attended found this program very educative and informative.

*Klavanya.1e*  
**Mrs. K Lavanya**  
**Asst. Prof**  
**IE(I) Coordinator**

*J Vijay Kumar*  
**Dr. J Vijay Kumar**  
**Prof and HOD**  
**Dept. of EEE**

**Head of the Department**  
**ELECTRICAL & ELECTRONICS ENGINEERING**  
**ANITS, Sangivalasa,**  
**Visakhapatnam-531162**



 **GPS Map Camera**

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**Lat 17.921204°**  
**Long 83.425213°**  
**11/09/23 12:32 PM GMT +05:30**

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF PARTICIPATION PROUDLY PRESENTED TO

*Raj Paul Peela*

of Anil Neerukonda Institute of Technology and Sciences for participating in Guest Lecture on

**“Awareness of Trends in Technology on Industrial Automation and HMI/SCADA”**

organised by department of Electrical and Electronics Engineering, ANITS on 10th September, 2023

in association with Institute of Engineers (IE(I)).

Mrs. K. Lavanya  
Co-ordinator, IE(I)

Prof. J. Vijay Kumar  
HOD, Dept. Of EEE, ANITS

Dr. K. Sri Rama Krishna  
Principal, ANITS



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Website: www.anits.edu.in

## Department of Electrical and Electronics Engineering

Date: 11/9/23

### Guest Lecture on "Awareness of Trends in Technology on Industrial Automation and HMI SCADA"

S:No	Roll. Number	Student Name	Year and Section	Signature
01	320126514046	Bhargavi B	IV <sup>th</sup> EEE-B	Bhargavi
2	320126514047	S. Anusha	IV/IV, EEE-B	Anusha
3	320126514049	P. Uma	IV/IV, EEE-B	Uma
4	321126514222	M. Pravalika	IV/IV, EEE-B	Pravalika
5	320126514045	A Surendra	4/4, EEE-B	A. Surendra
6	320126514044	A. Harshavardhan	4/4, EEE-B	A. Harsha
7	320126514061	M. Vaxshini	IV/IV, EEE-B	M. Vaxshini
8	320126514060	K. Gayatri	IV/IV, EEE-B	Gayatri
9	320126514057	K. Devika	IV/IV, EEE-B	Devika
10	321126514229	M. Mounika	IV/IV EEE-B	Mounika
11	320126514053	D. Navanya	IV/IV EEE-B	Navanya
12	320126514047	B. Navya	IV/IV EEE-B	B. Navya
13	320126514059	K. Chitti Thalli Reddy	IV/IV EEE-B	K. Chitti Thalli
14	320126514058	K. Yuktha Priya	IV/IV EEE-B	K. Yuktha Priya
15	320126514054	G. Shubhada	IV/IV EEE-B	G. Shubhada
16	321126514228	Ch. Sirisha	IV/IV EEE-B	Ch. Sirisha
17	320126514049	B. Purna Chandrika	IV/IV EEE-B	B. Purna Chandrika
18	320126514074	R. Sathvik	IV/IV EEE-B	R. Sathvik
19	320126514081	V. Raju	IV/IV EEE-B	V. Raju
20	320126514071	P. Tarun Kumar	IV/IV EEE-B	P. Tarun Kumar
21	320126514044	A. Harsha	IV/IV EEE-B	A. Harsha
22	320126514045	A. Surendra	IV/IV EEE-B	A. Surendra
23	320126514051	B. Akash	IV/IV EEE-B	B. Akash
24	320126514050	B. Raghu	IV/IV EEE-B	B. Raghu
25	321126514082	V. Pranveer	IV/IV EEE-B	V. Pranveer
26	320126514072	P. Bhargavi	IV/IV EEE-B	P. Bhargavi
27	320126514080	V. Jagadeesh	IV/IV EEE-B	V. Jagadeesh
28	320126514065	M.D. Bukari Baba	IV/IV EEE-B	M.D. Bukari Baba
29	320126514056	G. Santhosh Swaroop	IV/IV EEE-B	G. Santhosh Swaroop
30	320126514083	Y. Meganadh	IV/IV EEE-B	Y. Meganadh
31	320126514055	G. Mahendra	IV/IV EEE-B	G. Mahendra
32	321126514218	N. Sudheer	IV/IV EEE-B	N. Sudheer
33	321126514217	P. Mahendra	IV/IV EEE-B	P. Mahendra

S:NO	Roll. Number	Student Name	Year and Section	Signature
34	32112651424	N. Madhu	IV/IV EEE-B	N. Madhu
35	32112651425	R. Venkatesh	IV/IV EEE-B	R. Venkatesh
36	32112651421	O. Lita	IV/IV EEE-B	O. Lita
37	320126514078	T. Karthik	IV/IV EEE-B	T. Karthik
38	320126514085	B. Yashwanth	IV/IV EEE-B	B. Yashwanth
39	320126514073	P. Yashwanth Narayan	IV/IV EEE-B	P. Yashwanth
40	32112651423	K. Bharan	IV/IV EEE-B	K. Bharan
41	32112651424	Sk. Imran	IV/IV EEE-B	Sk. Imran
42	32112651427	P. V. Yashwanth Sai	IV/IV EEE-B	P. Yashwanth
43	32112651420	G. Chakrasethan	IV/IV EEE-B	G. Chakrasethan
44	32112651432	E. Anish	IV/IV EEE-B	E. Anish
45	320126514069	P. Rajpaul	IV/IV EEE-B	P. Rajpaul
46	320126514064	M. Joyce Christina	IV/IV EEE-B	M. Joyce Christina

*lavanya.k*  
Signature of faculty

*N. Jayakumar*  
Signature of HOD  
16/10/23

Head of the Department  
ELECTRICAL & ELECTRONICS ENG  
ANITS, Sangivalasa,  
Visakhapatnam-531167



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## Department of Electrical and Electronics Engineering

Date: 11/9/23

### Guest Lecture on "Awareness of Trends in Technology on Industrial Automation and HMI SCADA"

S.No	Roll. Number	Student Name	Year and Section	Signature
1	320126514086	A. Jayathri	IV/IV, EEE-C	A. Jayathri
2	321126514160	N. Madhavi	IV/IV, EEE-C	N. Madhavi
3	321126514155	L. Jyothi	IV/IV, EEE-C	L. Jyothi
4	321126514145	P.V. Narditha	IV/IV, EEE-C	P.V. Narditha
5	321126514150	K. Bhavana	IV/IV, EEE-C	K. Bhavana
6	321126514142	D.V.N. Tejaswini	IV/IV, EEE-C	D.V.N. Tejaswini
7	321126514147	A. Jesna Sri	IV/IV, EEE-C	A. Jesna Sri
8	321126514137	R. Sumasri	IV/IV, EEE-C	R. Sumasri
9	320126514088	B. Kurnumanjali	IV/IV, EEE-C	B. Kurnumanjali
10	320126514087	A. Suchasitha	IV/IV, EEE-C	A. Suchasitha
11	320126514091	G. Lavanya	IV/IV, EEE-C	G. Lavanya
12	321126514151	P. Tagore	IV/IV, EEE-C	P. Tagore
13	321126514144	G. Lakshitha	IV/IV, EEE-C	G. Lakshitha
14	321126514162	Chi. Abhi Ram	IV/IV, EEE-C	Chi. Abhi Ram
15	320126514102	N. Shyamala	IV/IV, EEE-C	N. Shyamala
16	320126514089	D. Pavani	IV/IV, EEE-C	D. Pavani
17	320126514088	M. Haripriya	IV/IV, EEE-C	M. Haripriya
18	320126514113	U. Goldy	IV/IV, EEE-C	U. Goldy
19	320126514114	Y. Priyanka	IV/IV, EEE-C	Y. Priyanka
20	320126514106	P.S.V. Vastore	IV/IV, EEE-C	P.S.V. Vastore
21	320126514105	P. Durga Prasad	IV/IV, EEE-C	P. Durga Prasad
22	320126514093	K. Maheswarasai	IV/IV, EEE-C	K. Maheswarasai
23	320126514107	P. Gowtham	IV/IV, EEE-C	P. Gowtham
24	320126514108	S. Manohar	IV/IV, EEE-C	S. Manohar
25	320126514110	S. Jaganesh	IV/IV, EEE-C	S. Jaganesh
26	320126514100	N. Yashwanth Kumar	IV/IV, EEE-C	N. Yashwanth Kumar
27	320126514104	P. Vamsi	IV/IV, EEE-C	P. Vamsi
28	320126514111	T. Nitesh Kumar	IV/IV, EEE-C	T. Nitesh Kumar
29	321126514154	K. Sampath Kumar	IV/IV, EEE-C	K. Sampath Kumar
30	321126514153	P. Abhishek Raj	IV/IV, EEE-C	P. Abhishek Raj
31	320126514095	K. Venkata Krishna	IV/IV, EEE-C	K. Venkata Krishna
32	320126514097	K. Sathwik	IV/IV, EEE-C	K. Sathwik
	320126514103	P. Satwik Krishna	IV/IV, EEE-C	P. Satwik Krishna







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Website: www.anits.edu.in

Department of Electrical and Electronics Engineering

Date: 11/9/23

## Guest Lecture on "Awareness of Trends in Technology on Industrial Automation and HMI SCADA"

S.No	Roll. Number	Student Name	Year and Section	Signature
1.	320126514014	G.V.SaiManasa	IV/IV - A	G.V.SaiManasa
2	320126514028	M. Renuka	IV/IV - A	M. Renuka
3	320126514008	CH. Sakya srilekha	IV/IV - A	CH. Kavya
4.	320126514004	B. Priyanka	IV/IV - A	Priyanka
5.	221126514106	M. Likhitha Krishna	IV/IV - A	Likhitha
6	221126514110	L. Keerthi	IV/IV - A	Keerthi
7.	320126514031	P. S.S. Tejaswini	IV/IV - A	P. S.S.
8.	320126514038	S. Vishnavi	IV/IV - A	S. Vishnavi
9.	320126514007	B. Haritha	IV/IV - A	Haritha
10.	320126514025	Z. Pavani Lakshmi	IV/IV - A	Z. Pavani
11.	320126514114	Y. Priyanka	IV/IV - C	Y. Priyanka
12.	320126514029	M. Keerthi Reddy	IV/IV - A	M. Keerthi
13.	320126514009	ch. Rohitha	IV/IV - A	ch. Rohitha
14	320126514011	D. Bharu Prasad	IV/IV - A	D. Bharu
15	320126514017	K. Rineeth Martin	IV/IV - A	Martin
16	320126514016	J. Sai Kiran	IV/IV - A	J. Sai Kiran
17	320126514041	V. Likhith Sai	IV/IV - A	V. Likhith Sai
18	320126514002	A. Yuva Kiran	IV/IV - A	A. Yuva Kiran
19	320126514042	V. Sunela	IV/IV - A	V. Sunela
20	321126514112	S. Hari Praveen	IV/IV - A	S. Hari Praveen
21	321126514111	V. Vamsi Krishna	IV/IV - A	V. Vamsi Krishna
22	321126514114	M. Kishna	IV/IV - A	M. Kishna
23	321126514108	P. Satya chandra	IV/IV - A	P. Satya chandra
24	321126514105	M. Rajesh	IV/IV - A	M. Rajesh
25	321126514116	J. Bhargav	IV/IV - A	J. Bhargav
26	320126514034	S. Mithun	IV/IV - A	S. Mithun
27	321126514113	J. N. Teja	IV/IV - A	J. N. Teja
28	320126514021	K. Tirumala Rao	IV/IV - A	K. Tirumala Rao
29	320126514020	K. Visweswara Rao	IV/IV - A	K. Visweswara Rao
30	320126514026	B. Sukumar	IV/IV - A	B. Sukumar
31	320126514043	Y. Akash	IV/IV - A	Y. Akash
	320126514109	J. Nani Sai	IV/IV - A	J. Nani Sai
	320126514001	A. Shanmukh	IV/IV - A	A. Shanmukh

