

REPORT

PRAGATI ENGINEERING COLLEGE

(Approved by AICTE, Permanently Affiliated to JNTUK, KAKINADA & Accredited by NBA)

1-378, A.D.B. Road, Surampalem, Near Peddapuram-533437



“MLoT Workshop: Intelligent IoT using ML”

Date: 9-9-2025 to 11-9-2025

Day: Tuesday to Thursday

Turing Club organised by the Dept. of CSE – AI&ML of Pragati Engineering College in association with Career Guidance Cell is organizing a seminar on “**Intelligent IoT using ML**” as part of Industry 4.0.

Attendance list :

S.NO	ROLL NO	NAME	Section
1	24A31A4201	ACHANTA VENNELA	A
2	24A31A4202	AKULA RISHITHA SAI	A
3	24A31A4203	ANISSETTI VARSHITHA	A
4	24A31A4205	BRUMDHAVANAM SAI SARANYA	A
5	24A31A4206	CHIKKALA MARY BLESSICA	A
6	24A31A4207	CHITTURI SAI DHANU SHREE	A
7	24A31A4208	DATLA SRI VENKATA LAKSHMI SOWJANYA	A
8	24A31A4209	GURU TULASI HIMA BINDU	A
9	24A31A4210	JAMPA SIRI CHANDANA PRIYA	A
10	24A31A4211	KADALI HARSHINI SAI SRI	A
11	24A31A4212	KADIYAM SOWJANYA DURGA LAKSHMI	A
12	24A31A4213	KALISSETTI YOGITHA	A
13	24A31A4214	KONDE ANUSHA	A
14	24A31A4216	KOTHA SRI NIHARIKA	A
15	24A31A4217	KUNA PUJITHA	A
16	24A31A4218	MARNI TULASI SREE AMRUTHA LAKSHMI	A
17	24A31A4219	MIRTHIPATI LEELA BHARGAVI	A
18	24A31A4220	MORUKURTHI SATHYA SAI LOVA NAGESWARI	A
19	24A31A4221	MUMMIDI PRASANNA	A
20	24A31A4223	NARISSETTY GOPIKA NISCHALA	A
21	24A31A4224	PADALA PAVANI NAGA BADRESWARI	A
22	24A31A4225	PADILAM DEEPIKA SATYA JAYA DURGA	A
23	24A31A4226	PASALA CHARISHMA	A
24	24A31A4227	PIRADI SAI RUPA SRI	A
25	24A31A4229	THOYYETI SAI SREE	A
26	24A31A4230	VANUMU YASHODA LAKSHMI	A
27	24A31A4231	ADDALA SYAM SANJAY	A
28	24A31A4232	ADIVARAPUPETA ROHITH MOULI	A
29	24A31A4233	BORUSU SRI SATYA NOOKA RAJU	A
30	24A31A4234	DAMMALA HARI KISHORE	A
31	24A31A4235	DODDIPATLA VARUN	A
32	24A31A4236	GANDRALA DHEERAJ REDDY	A
33	24A31A4238	GURRAM RAJENDRA	A
34	24A31A4239	KANCHI JYOTHIK PAVAN	A
35	24A31A4242	KOLLU ABHIRAM REDDY	A
36	24A31A4243	KUNAM NAVEEN REDDY	A
37	24A31A4245	MADDIMSETTI MOHANA RAMAJI SARAVAN	A

38	24A31A4250	NARALASETTI VENKATA RAJU	A
39	24A31A4252	PAKKURTHI VARUN	A
40	24A31A4253	PAPPU HAYAGREEV CHARAN TEJA	A
41	24A31A4256	SANABOYINA DURGA NAGA SAIRAM VIVEK	A
42	24A31A4258	SURAVARAPU HARSHAVARDHAN	A
43	24A31A4260	THALLAPALLI VENKATA AVINASH	A
44	24A31A4262	VADAPALLI VIJAY SRI KRISHNA	A
45	24A31A4264	VARANASI SRIRAMA SUBRAHMANYA ANISH	A
46	24A31A4266	VISSA V SAI HARI KESAVA PRABHAKARA PRASAD	A
47	25A35A4203	DANGETI VARUN SURYA TEJA	A
48	25A35A4205	NOOLU LAKSHMI DEEPAK	A
49	24A31A4269	CHINNI RAMYA NANDINI	B
50	24A31A4270	EETHA MANO HARIKA	B
51	24A31A4271	GEDALA SNEHA BINDU	B
52	24A31A4272	GEESALA BHAVANI SAI SUMA	B
53	24A31A4273	GUTTULA HARSHITA L PRASANNA	B
54	24A31A4274	JAMPA ASHWITHA	B
55	24A31A4275	JAMPA HAMSIKA SIRI	B
56	24A31A4276	KADA MANOGNA SAI SPURTHY	B
57	24A31A4277	KAKARLAPUDI APARNA HASINI	B
58	24A31A4278	KALLA RAMYA SATYA SRI	B
59	24A31A4279	KOKA RAHITYA	B
60	24A31A4280	KOLIKONDA MIDHUNA	B
61	24A31A4281	KOMALLAPALLI SATYA SRI ALEKHYA	B
62	24A31A4282	KOMARAPU RATNA MADHURYA	B
63	24A31A4283	KONDAYYPAPALEPU BHUVANA CHANDRIKA	B
64	24A31A4284	KOTHAPALLI SAI SATYA DEEPIKA	B
65	24A31A4285	KOTHARA LAVANYA	B
66	24A31A4286	MALLAMPATI SAI PRAVEENA	B
67	24A31A4287	MARREDDI SAI VEERA SATWIKI	B
68	24A31A4288	MATTAPARTHI NAGA DEVI VINAY SANTHOSHI	B
69	24A31A4289	PABBIREDDY SAI SANTHOSHINI	B
70	24A31A4292	BANDARI BHARGAVI LAKSHMI	B
71	24A31A4293	RANGANADHAM CHANDRIKA	B
72	24A31A4298	SUNKARA ALEKHYA	B
73	24A31A4299	TAVITIKI THESHMAJA	B
74	24A31A42A0	VADDADI SESA GANESH SRINIVASA LAKSHMI	B
75	24A31A42A1	VADREVVU DURGA SREE HARSHINI	B
76	24A31A42A3	VUTA VIJAYA LAKSHMI ADI GANGA SAI	B
77	24A31A42A5	BOBBA PAVAN SANTHOSH	B
78	24A31A42A6	BOGULA NAGA VENKATA CHAITANYA YADAV	B
79	24A31A42A7	BONDADA BHAGAVAN LAYAKAR	B

80	24A31A42A8	DAMARASINGU VINAY	B
81	24A31A42A9	DANDU SRIRAM VARMA	B
82	24A31A42B3	GUNDA M N V L PAVAN KUMAR	B
83	24A31A42B4	GUTTULA VEERA VENKATA SATYANARAYANA KUMAR	B
84	24A31A42B6	KARNEEDI CHAITANYA KUMAR	B
85	24A31A42B7	KATRU VISHAL BABU	B
86	24A31A42B8	MALLABATTULA TARUN	B
87	24A31A42C0	PAMPANA CHARAN SANJAY	B
88	24A31A42C1	RAPAKA KARTHIK	B
89	24A31A42C2	RYALI SATYA VENKATA SANDEEP	B
90	24A31A42C3	SAKA AJAYKUMAR	B
91	24A31A42C5	SANCHANA SIVA RAMA SAI	B
92	24A31A42C6	SAVARAPU SIMON	B
93	24A31A42D1	SRIRAJA KAKARLAPUDI GOWTHAM VARMA	B
94	24A31A42D2	VARANASI PRUDHVINARAYANA	B
95	25A35A4207	GORLI NIHARIKA	B
96	25A35A4209	ANUSURI DURGA SANTHOSH	B
97	25A35A4210	CHIKKALA VIVEK	B
98	25A35A4212	KUDIPUDI VAMSI TEJA	B
99	24A31A42D3	BOMMADEVARA HANSINI	C
100	24A31A42D4	CHIKARAMILLI PADMA SRI	C
101	24A31A42D5	CHINNAM HARSHITHA	C
102	24A31A42D6	DONTHAMSETTI H V DURGA VENKATA SRUJANA	C
103	24A31A42D7	DWARAMPUDI MANIDEVI	C
104	24A31A42D8	GANISETTI ISWARYA	C
105	24A31A42D9	KANCHAPOGU KAVYA	C
106	24A31A42E0	KANIKELLA MAMATHA	C
107	24A31A42E1	KATTAMURU YAMUNAKANAKASRI LAKSHMI	C
108	24A31A42E2	KOPPARTHY GAYATRI DEVI	C
109	24A31A42E3	KOTHEM KANAKA MAHALAKSHMI	C
110	24A31A42E4	LANKA PARVATHI SAI PRAHARSHINI	C
111	24A31A42E5	MADHURA SRIJITHA	C
112	24A31A42E6	MARINA LAVANYA	C
113	24A31A42E7	MASA DEVI ISWARYA	C
114	24A31A42E8	MOHAMMAD SUGARA BANU	C
115	24A31A42E9	MUSHINI HARSHITHA	C
116	24A31A42F0	MYPALA LAKSHMI SIVANI	C
117	24A31A42F1	NATRA UMA MAHESWARI	C
118	24A31A42F2	PAKKURTHI BINDHU MADHAVI	C
119	24A31A42F3	PANDIRI SRAVYA	C
120	24A31A42F4	PENUMALLA S N L S KEERTHI	C
121	24A31A42F5	PILLI LAKSHMI SRIVALLI	C

122	24A31A42F6	REDDEM NIHARIKA	C
123	24A31A42F7	RUDRA THANMAI KRISHNA	C
124	24A31A42F8	SAKA VEERA SATYA SAI PRASANNA	C
125	24A31A42G0	TADITURI PRABHATA SARYU	C
126	24A31A42G1	TSALIKI VEERA LAKSHMI MANASA LAHARI	C
127	24A31A42G2	VALLURI SRI NUTHANA	C
128	24A31A42G3	YALAMANCHILI KEERTHI VARSHINI	C
129	24A31A42G5	BALAGA SYAM KUMAR	C
130	24A31A42G7	CHALLA ABHISHEK REDDY	C
131	24A31A42G8	DHARMAVARAPU BALA UMA SHANKAR	C
132	24A31A42G9	DUGGANA DHANVY	C
133	24A31A42H0	GADA SHANKAR SUJITH	C
134	24A31A42H2	GORANTLA JOESYAM KUMAR	C
135	24A31A42H4	KARRA NOEL JOSEPH	C
136	24A31A42H5	KODURI VISESH VARDHAN	C
137	24A31A42H6	KONA DURGA PRASAD	C
138	24A31A42H7	KURUBA M MAHESH	C
139	24A31A42H8	MEDIDA LAKSHMI SIVA SAIRAM	C
140	24A31A42I1	MOTHA SRINIVAS	C
141	24A31A42I2	MUDDANA D S S VEERA CHAKRA PRAKASH	C
142	24A31A42I4	NALAM GNANADEEP ABHILASH	C
143	24A31A42I5	NIDADALA AMARESH	C
144	24A31A42I7	PILLI NANDA KISHORE	C
145	24A31A42J1	SEELAMANTHULA BHARADWAZ	C
146	24A31A42J2	SHAIK ABDUL FAISAL	C
147	24A31A42J4	SIDDA VENKATA SRI HARI HARAN	C
148	24A31A42J7	TEEGALA SAIDEPAK	C
149	24A31A42J8	VATTIKALLA SAI SRINIVAS	C
150	25A35A4213	ARISA DEEPTHI VIJAYA	C
151	25A35A4214	KARUMURI VYSHNAVI	C
152	25A35A4216	MANGALI RAJASEKHAR	C

FEED BACK ANALYSIS

ID	Name2	Roll number	Section	Speaker way of explanation	Content of the workshop	What would you suggest to help us to improve this workshop	Overall satisfaction	Other suggestions
1	K.pujitha	24a31a4217	A	5	5		5	
2	Datla Sri Venkata Lakshmi Sowjanya	24A31A4208	A	5	5		5	
3	p.charishma	24a31a4226	A	5	5		5	
4	Geesala Bhavani sai suma	24A31A4272	B	5	5	I learn new things	5	No suggestions
5	Geesala Bhavani sai suma	24A31A4272	B	5	5	I learn new things	5	No suggestions
6	V vijayalakshmi	24A31A42A3	B	4	4		4	
7	Katru Vishal Babu	24A31A42B7	B	4	4	Providing good functioning kits	4	
8	K.ramya satya sri	24A31A4278	B	5	4		4	
9	VADREVV DURGA SREE HARSHINI	24A31A42A1	B	3	3	Nothing	3	Nothing
10	P SRAVYA	24A31A42F3	C	5	5	No. You are already perfect	5	No
11	K.Sri Niharika	24A31A4216	A	5	5	No suggestions but support us in this manner only	5	I like the workshop what we done for 3 days. The sir's and mam also supporting very well and I like the way of explanation.
12	M Leela Bhargavi	24A31A4219	A	4	4	Yes	4	
13	Varun doddipatla	24A31A4235	A	4	4	Patience and time	3	Give the opportunity to everyone
14	D. Bala uma shankar	24A31A42G8	C	5	5	Nothing	4	Nothing
15	SATHYA SAI LOVA NAGESWARI MORUKURTHI	24A31A4220	A	4	3	interact with all the students	4	
16	Maddimsetti mohana ramaji saravan	24A31A4245	A	4	4	Need team interaction and team work	3	Need to explain more but there is less time

17	Vennela	24A31A4201	A	2	1		1	
18	Vennela	24A31A4201	A	2	1		1	
19	Siva teja vegiseti	24A31A42J5	C	5	5	Improve scheduling Make sure your workshop runs as close to full utilisation as possible	5	Have to improve scheduling Apart of this all is good
20	Siva teja vegiseti	24A31A42J5	C	5	5	Improve scheduling Make sure your workshop runs as close to full utilisation as possible	5	All is good
21	Srk gowtham varma	24A31A42D1	B	5	5	No	5	

4. Rate the Speaker way of explanation (0 point)



5. Content of the workshop (0 point)



Overall rating: **Good**

Content Delivered in the Event:

Day 1: Introduction

Session 1: Fundamentals of IoT

Definition: IoT connects physical devices via the internet.

Key components: sensors, actuators, gateways, cloud platforms.

Communication protocols: MQTT, HTTP.

Hands-On: Setup NodeMCU/ESP8266, collect temperature & humidity data, send to Blynk/ThingSpeak.

Session 2: Basics of Machine Learning

ML Types: Supervised, Unsupervised, Reinforcement.

Algorithms: Linear Regression, Decision Trees, K-Means.

Role of ML in IoT: predictive maintenance, anomaly detection.

Hands-On: Python ML model (Linear Regression using sklearn).

Day 2: Building IoT Systems with ML

Session 1: Data Collection & Preprocessing

IoT Data Pipeline: Collect → Process → Store.

Techniques: cleaning, normalization, feature extraction.

Importance: real-time data for ML.

Hands-On: Collect sensor data → Store in cloud → Preprocess using pandas/NumPy.

Session 2: Training & Deploying Models

Train IoT-based ML models (classification/regression).

ML Frameworks: TensorFlow, scikit-learn.

Deployment: Edge devices or cloud platforms.

Hands-On: Build regression/anomaly detection model and deploy on IoT device/cloud.

Day 3: Real-World Applications & Projects

Session 1: Advanced Applications

Use cases: smart farming, predictive maintenance, healthcare.

Edge ML optimization, AutoML, pre-trained models.

Hands-On: Soil moisture prediction using ML for irrigation.

Session 2: Project Implementation

- **Project Example – Smart Farming System**

Sensors: temperature, humidity, soil moisture.

ML Model: predict irrigation needs.

Tools: NodeMCU, Python, TensorFlow/scikit-learn.

Smart Healthcare Monitoring System

IoT Sensors: Heart rate, SpO2, ECG.

ML Model: Anomaly detection for early warning of cardiac events.

Tools: Raspberry Pi, TensorFlow Lite.

Predictive Maintenance for Industry 4.0

IoT Sensors: Vibration, temperature, machine runtime.

ML Model: Predict machine failure before breakdown.

Tools: NodeMCU + Cloud ML (Azure, AWS).

Smart Traffic Management

IoT Sensors: Cameras, RFID, vehicle count sensors.

ML Model: Predict traffic congestion and optimize signal timings.

Tools: Python + OpenCV + TensorFlow.

Energy Optimization in Smart Homes

IoT Sensors: Smart meters, temperature, occupancy sensors.

ML Model: Predict energy consumption and optimize usage.

Tools: Arduino, Python, scikit-learn.

Closing Session

- Student project presentations.
- Challenges and solutions in IoT-ML integration.

Some sample codes:

EX 1:

```
const int trigPin = 12;
const int echoPin = 14;
//define sound velocity in cm/uS
#define SOUND_VELOCITY 0.034
#define CM_TO_INCH 0.393701
long duration;
float distanceCm;
float distanceInch;
void setup() {
  Serial.begin(115200); // Starts the serial communication
  pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
  pinMode(echoPin, INPUT); // Sets the echoPin as an Input
}
void loop() {
  // Clears the trigPin
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  // Sets the trigPin on HIGH state for 10 micro seconds
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  // Reads the echoPin, returns the sound wave travel time in microseconds
  duration = pulseIn(echoPin, HIGH);
  // Calculate the distance
  distanceCm = duration * SOUND_VELOCITY/2;
  // Convert to inches
  distanceInch = distanceCm * CM_TO_INCH;
  // Prints the distance on the Serial Monitor
  Serial.print("Distance (cm): ");
  Serial.println(distanceCm);
  Serial.print("Distance (inch): ");
  Serial.println(distanceInch);
  delay(1000);
}
```

EX:2

```
import numpy as np
import pandas as pd
```

```

from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error
from google.colab import files

# Upload the file
uploaded = files.upload()

# Load the CSV file into a DataFrame
data = pd.read_csv('sensordata.csv')

# Data Preprocessing
data.dropna(inplace=True)

# Feature Selection
features = data[['Temperature', 'Humidity']]
target = data['SoilMoisture']

# Model Selection (Linear Regression)
model = LinearRegression()

# Training the Model
X_train, X_test, y_train, y_test = train_test_split(features, target, test_size=0.2, random_state=0)
model.fit(X_train, y_train)

# Evaluation
y_pred = model.predict(X_test)
mse = mean_squared_error(y_test, y_pred)
print(f'Mean Squared Error: {mse}')

# Prediction
new_data = np.array([[25, 50], [30, 60]]) # New data: [[Temperature, Humidity], ...]
predictions = model.predict(new_data)
print(f'Predicted Soil Moisture: {predictions}')

```

PHOTOS:







ప్రగతిలో ఇంటిలిజెంట్ ఐఓటి పై శిక్షణ

గండేపల్లి, సెప్టెంబర్
11, (ప్రభాతవార్త) :

ప్రగతి ఇంజనీరింగ్ కళాశాలలో సి ఎస్ ఇ (ఎ ఐ ఎమ్ ఎల్) విభాగం ఆధ్వర్యంలో ద్వితీయ సంవత్సరం విద్యార్థిని, విద్యార్థులకు పై ప్రో సెక్యూరిటీ సోల్యూషన్స్ ప్రైవేట్ లిమిటెడ్ సహకారంతో “ఐఓటి ఇంటిగ్రేటెడ్ విత్ ఎమ్ ఎల్” అను అంశము పై మూడు రోజుల పాటు వర్క్ షాప్ నిర్వహించామని కళాశాల చైర్మన్ డాక్టర్ పరుచూరి కృష్ణారావు తెలిపారు. ఈ సందర్భముగా ఆయన మాట్లాడుతూ తమ ప్రగతి ఇంజనీరింగ్ కళాశాల ఇటువంటి సూతన టెక్నాలజీల గురించి విద్యార్థులకు



అవగాహన కల్పించడం ద్వారా వారిని భవిష్యత్తు అవసరాల ఉపయోగపడే మంచి ఇంజనీర్లుగా తయారుచేస్తోందని పేర్కొన్నారు. అనంతరం రిసోర్స్ పర్సన్స్ ఎన్ చైతన్య రాజీ, ఎమ్ మహేష్ జీ పవన్, పై ప్రో సెక్యూరిటీ మాట్లాడుతూ ఐఓటి ఇంటిగ్రేటెడ్ విత్ ఎమ్ ఎల్ అధునికంగా, సమర్థవంతంగా సూతనంగా ఎఐ ప్రాజెక్టులను డెవలప్ చేయడానికి ఉపయోగపడతాయని పేర్కొంటూ వాటి ఉపయోగాలను వివరించారు. ఈ కార్యక్రమంలో సి. ఎస్. ఇ. విభాగాధిపతి డాక్టర్ ఎ. రాధాకృష్ణ, కళాశాల డైరెక్టర్ మానేజ్మెంట్ ఎం. వి. హరనాథబాబు, వైస్ ప్రెసిడెంట్ ఎం. సతీష్, డైరెక్టర్-అకడమిక్స్ డాక్టర్ కె. సత్యనారాయణ, ప్రిన్సిపాల్ డాక్టర్ జి. నరేష్, ప్రోగ్రామ్ కోఆర్డినేటర్లు విద్యార్థిని, విద్యార్థులు పాల్గొన్నారు.



SPYPRO SECURITY SOLUTIONS Pvt. Ltd.



Pragati Advanced Technology Hub



DEPARTMENT OF CSE (Artificial Intelligence & Machine Learning)

Organizes

A 3-Day Expert Workshop on

“MLoT Workshop Intelligent IoT with ML”

Under IAENG (International Association of Engineers & Turing Club)

from 9th September to 11th September 2025

in Association with SPYPRO SECURITY SOLUTIONS Pvt. Ltd.



Pragati Engineering College
(AUTONOMOUS)





PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

DEPARTMENT OF CSE (Artificial Intelligence & Machine Learning)

PEC / Admin / Circular / 2025 / Turing CLUB

Date: 2- 9-2025

All the staff, Pragati Turing club coordinators, Third year Students are informed that a seminar on “**MLoT Workshop: Intelligent IoT using ML**” is being organized by Turing club & IAENG in association with career Guidance cell. The details are given below.

Date: 9-9-2025 to 11-9-2025

Time: 09:00 AM to 04:00 PM

Venue: COMMON LAB

Faculty Co-Ordinator: Mrs.L.Yamuna, Mrs.G.V.Rajeswari

Student Co-Ordinator: A.B.V.D.BHIMESH (III -year CSE (AI&ML)-23A31A42G2)

G.D.ESWAR ASHOK (III-year CSE (AI&ML)-23A31A42G9)

Speaker: Mrs.N.Chaithanya Rani,M.Mahesh,G. Pavan
SPYPRO SECURITY SOLUTION Pvt Ltd.

Faculty coordinator

HoD-CSE (AI&ML)

Copy to:

- 1) Chairman /All Directors / Vice President for kind information.
- 2) Vice Principal/Dean T&P for information.
- 3) All HoDs are requested to circulate among your staff members.
- 4) Convener-Career Guidance cell
- 5) Office File.