



**PRAGNA**  
WISDOM | INNOVATION | EXCELLENCE



***Department of Computer Engineering  
Government Polytechnic Proddatur***

# **Biannual Magazine**

July - December 2024

Vol. 2 Edition No. 1



Advisor : S. Venkat Mohan SL/ CME  
Chief Editor : T. Naga Jyothi L/CME

Editors: A.Pallavi &  
R. Dileep Kumar



# WALK THROUGH

## **Walking Through PRAGNA**

This edition of PRAGNA reflects learning shaped through exposure, experience, and active participation. As you walk through these pages, you will find students stepping beyond classrooms—into industries, institutions, communities, celebrations, and collaborative platforms that broaden understanding and strengthen confidence.

From industrial visits that connect theory with real-world application, to technical workshops that introduce emerging domains, from cultural and spiritual engagements that build values, to sports, service, and teamwork that nurture discipline and leadership—this issue captures education in motion.

PRAGNA continues to document not just what students learn, but how they grow—through experience guided by mentorship, responsibility shaped by participation, and clarity gained through reflection.

***“PRAGNA has moved from learning values to living them.”***

## **PRAGNA VISION MISSION**

### **Vision:**

To inspire students to develop wisdom, technical excellence, and innovative thinking for a brighter digital future.

### **Mission:**

To promote technical knowledge and emerging technologies.

To encourage innovation, creativity, and practical learning.

To showcase student achievements, projects, and research.

To nurture ethical values, teamwork, and social responsibility.

To provide a platform for holistic student development.



**PRAGNA**

*Wisdom | Innovation | Excellence*

***A Biannual Magazine of the Department of Computer Engineering***

**GOVERNMENT POLYTECHNIC, PRODDATUR.**

# FROM THE MENTORS' DESK & EDITORIAL TEAM



**S. VENKAT MOHAN, SL/ CME**

## **Exposure & Experience:**

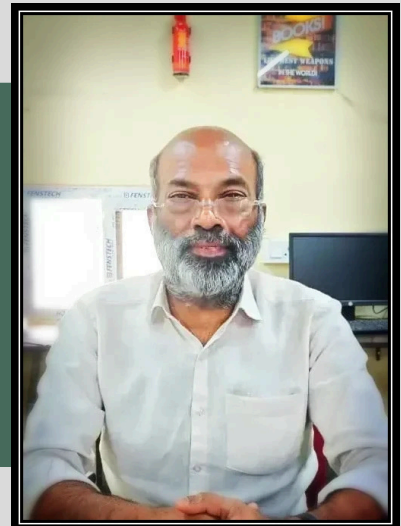
This edition of PRAGNA highlights the importance of exposure in education. Industrial visits, technical workshops, social initiatives, sports, and celebrations helped students connect classroom learning with real-world experience. Such exposure nurtures confidence, adaptability, and clarity of thought.

PRAGNA continues to serve as a mirror of student growth shaped through experience and guided by mentorship.

***“Exposure builds confidence, experience builds clarity — together, they shape responsible learners.” ~ S. Venkat Mohan***

**M. VIJAYA KUMAR, HOD CME**

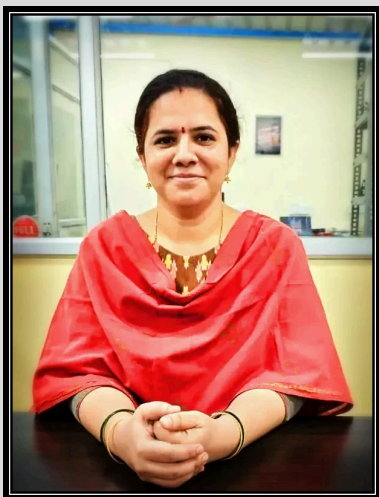
I am proud to present PRAGNA – the Biannual Magazine, which showcases the academic achievements, creativity, and innovative spirit of our department. This magazine reflects the collective efforts of students and faculty in sharing knowledge, experiences, and talents beyond the classroom. I appreciate the editorial team for their dedication and encourage students to continue exploring, learning, and expressing their ideas with confidence.



**J. ASHOK BABU, PRINCIPAL**

It gives me great joy to introduce PRAGNA, our biannual magazine that highlights the talents, enthusiasm, and accomplishments of our students. This publication showcases not only academic growth but also creativity, leadership, and teamwork. I commend the students and faculty for their collective efforts and encourage learners to actively engage in such platforms that nurture confidence, creativity, and lifelong learning.



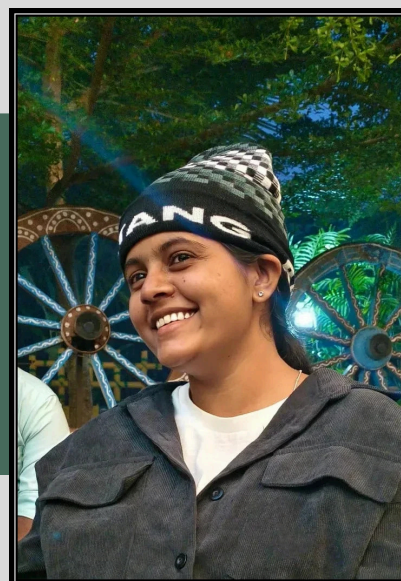


**Smt. T. Naga Jyothi (L/ CME)**

It gives me great pleasure to present PRAGNA – the Biannual Magazine, a platform that reflects the creativity, achievements, and academic growth of our students. This magazine is the result of teamwork, dedication, and sincere efforts from both students and faculty. I appreciate the enthusiasm of the student editors and contributors and hope PRAGNA continues to inspire curiosity, innovation, and excellence in every reader.

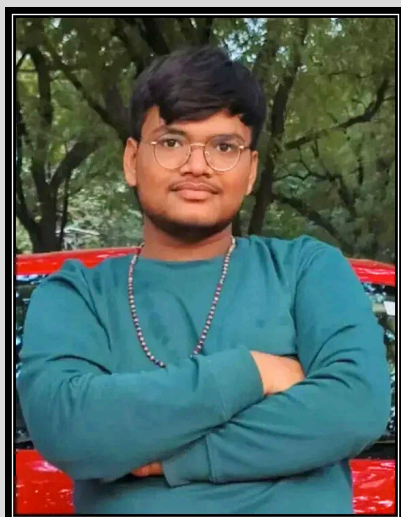
**A.Pallavi (III Year, CME)**

PRAGNA is a collective expression of ideas, creativity, and experiences shared by our fellow students. Working on this biannual magazine has been a rewarding journey that strengthened teamwork and creativity. I thank the faculty for their guidance and all contributors for their support, and I hope this edition of PRAGNA inspires students to explore their talents beyond academics.



**R.Dileep Kumar (II Year, CME)**

Being part of the editorial team for PRAGNA – the Biannual Magazine has been an enriching experience. This magazine brings together diverse thoughts, achievements, and learning moments of our institution. I express my gratitude to the faculty mentors and contributors, and I believe PRAGNA will continue to encourage confidence, creativity, and a spirit of learning among students.



# ABOUT PRAGNA

PRAGNA – The Light of Knowledge and Innovation  
A Biannual Magazine of the Department of Computer Engineering  
Government Polytechnic, Proddatur

## About PRAGNA

PRAGNA (प्रज्ञा / प्रज्ञा) is a Sanskrit-derived word that means Wisdom, Insight, and Deep Understanding. It represents not just the acquisition of knowledge, but the ability to think clearly, apply learning wisely, and grow with values.

PRAGNA is the official biannual magazine of the Department of Computer Engineering, Government Polytechnic, Proddatur. It serves as a vibrant platform to showcase the academic, technical, co-curricular, and social achievements of our students and faculty.

## Purpose of PRAGNA

The primary objective of PRAGNA is to encourage knowledge sharing, innovation, and holistic development among students.

Through carefully curated content, the magazine reflects the spirit of learning, creativity, teamwork, and social responsibility.

## PRAGNA provides opportunities for students to:

- Express technical ideas
- Share project experiences
- Highlight achievements
- Improve communication skills
- Develop leadership qualities

## What PRAGNA Represents

PRAGNA reflects the three pillars of education:

### 1. Knowledge (Jñāna)

PRAGNA features technical articles on emerging technologies such as Artificial Intelligence, Machine Learning, IoT, Cyber Security, Remote Sensing, and Nanotechnology.

In addition, students actively read books and share thoughtful book reviews, reflecting their reading habits, critical thinking skills, and intellectual curiosity. These reviews promote a strong reading culture and encourage knowledge beyond the classroom.

### 2. Skill (Kaushala)

It highlights practical learning through projects, industrial visits, workshops, IIRS programs, and hands-on training activities.

### 3. Values (Sanskara)

PRAGNA also documents social service, NSS activities, sports, cultural events, and leadership initiatives that build character and responsibility.

### **Alignment with Department & Institute**

The vision and mission of PRAGNA are closely aligned with the Department of Computer Engineering and the Institute's educational goals.

By integrating academics, skills, and values, the magazine supports the development of competent, responsible, and future-ready professionals.

### **PRAGNA – More Than a Magazine**

PRAGNA is not just a collection of articles and photographs.

It is a reflection of our journey, our growth, our efforts, and our aspirations.

It celebrates:

- Student creativity
- Faculty mentorship
- Academic excellence
- Social responsibility
- Institutional pride

### **Policy Perspective - Skill Development & Technical Education in Andhra Pradesh**

The Government of Andhra Pradesh emphasizes skill development and technical education as essential for creating industry-ready, innovative, and employable youth. The state's vision focuses on practical learning, emerging technologies, and continuous upskilling aligned with societal and industry needs.

PRAGNA reflects this policy direction by encouraging students to explore technology, build skills, and actively participate in academic, co-curricular, and socially relevant activities, translating policy intent into meaningful learning experiences.

### **Conclusion**

In a rapidly evolving digital world, PRAGNA stands as a symbol of wisdom, innovation, and excellence. It encourages students to think beyond textbooks, explore new technologies, serve society, and shape a better future.

PRAGNA is the voice of our department, the mirror of our achievements, and the light that guides our learning journey.



**PRAGNA**

*Wisdom | Innovation | Excellence*

***A Biannual Magazine of the Department of Computer Engineering***

**GOVERNMENT POLYTECHNIC, PRODDATUR.**

## Mapping Matrix of PRAGNA with Department & Institute Vision–Mission

### 1. Vision Mapping

PRAGNA Vision	Department / Institute Vision	Alignment Explanation
<i>To inspire students to develop wisdom, technical excellence, and innovative thinking</i>	<i>To provide quality technical education and develop competent professionals</i>	<i>PRAGNA promotes technical articles, projects, and innovation that strengthen academic excellence.</i>
<i>To prepare students for a brighter digital future</i>	<i>To produce future-ready graduates with industry-relevant skills</i>	<i>Articles on AI, IoT, ML, Cyber Security, and emerging technologies make students future-ready</i>
<i>PRAGNA provides a platform for new ideas, research, and student creativity</i>	<i>PRAGNA provides a platform for new ideas, research, and student creativity</i>	<i>PRAGNA provides a platform for new ideas, research, and student creativity</i>

### 2. Mission Mapping

PRAGNA Mission	Department / Institute Mission	Alignment
<i>Promote technical knowledge &amp; emerging technologies</i>	<i>Strengthen technical competence</i>	<i>Technical articles and project showcases enhance subject knowledge.</i>
<i>Encourage innovation &amp; practical learning</i>	<i>Support hands-on learning</i>	<i>Industrial visits, IIRS programs, and project experiences are highlighted.</i>
<i>Showcase student achievements &amp; research</i>	<i>Encourage student excellence</i>	<i>PRAGNA recognizes academic and co-curricular achievements.</i>
<i>Nurture ethical values &amp; teamwork</i>	<i>Develop responsible citizens</i>	<i>NSS, social service, and team activities reflect value-based education.</i>
<i>Provide a platform for holistic development</i>	<i>Promote overall personality development</i>	<i>Cultural, sports, leadership, and reading activities are included.</i>



### 3. Activity-Level Mapping

PRAGNA Content	Institute Objective	Outcome
<i>Technical Articles</i>	<i>Academic Excellence</i>	<i>Improved subject knowledge</i>
<i>Book Reviews</i>	<i>Reading Culture</i>	<i>Critical thinking</i>
<i>Projects</i>	<i>Skill Development</i>	<i>Practical competence</i>
<i>NSS Activities</i>	<i>Social Responsibility</i>	<i>Ethical values</i>
<i>Sports &amp; Cultural</i>	<i>Personality Development</i>	<i>Confidence &amp; leadership</i>
<i>Faculty Achievements</i>	<i>Institutional Pride</i>	<i>Motivation</i>

### 4. Outcome-Based Alignment

Outcome	PRAGNA Contribution
<i>Knowledge</i>	<i>Technical content</i>
<i>Skills</i>	<i>Projects &amp; workshops</i>
<i>Values</i>	<i>NSS &amp; service</i>
<i>Communication</i>	<i>Student writing</i>
<i>Leadership</i>	<i>Editorial roles</i>

### 5. Conclusion

The Vision and Mission of PRAGNA are closely aligned with the Vision and Mission of the Department of Computer Engineering and the Institute. By promoting technical knowledge, innovation, practical learning, ethical values, and holistic student development, PRAGNA supports the institutional objective of producing competent, responsible, and future-ready professionals. The magazine serves as an effective platform that integrates academics, skills, and values in line with outcome-based education.



***A Biannual Magazine of the Department of Computer Engineering***

**GOVERNMENT POLYTECHNIC, PRODDATUR.**

# ABOUT OUR DEPARTMENT

The Department of Computer Engineering at Government Polytechnic, Proddatur (GPT Proddatur) was established in the year 2006 with the objective of providing quality technical education in the field of computer engineering. Since its inception, the department has been striving to produce competent, skilled, and industry-ready professionals.

The department offers a Diploma in Computer Engineering, as per the curriculum prescribed by SBTET, Andhra Pradesh, focusing on a balanced integration of theoretical concepts and practical applications. The program equips students with fundamental and advanced knowledge in areas such as programming, database management systems, web technologies, computer networks, and operating systems.

The department is supported by well-equipped computer laboratories, modern software tools, and internet facilities that enable students to gain hands-on experience and stay updated with current technologies. Continuous improvement of infrastructure and learning resources reflects the department's commitment to academic excellence.

A team of experienced and dedicated faculty members plays a crucial role in mentoring students academically and professionally. The department encourages students to participate in technical workshops, seminars, project exhibitions, coding competitions, and industrial visits, which enhance their practical skills and exposure to industry trends.

In addition to academics, the department actively promotes co-curricular and extracurricular activities, fostering leadership, teamwork, and social responsibility among students. Participation in technical fests, community service programs, cleanliness drives, and national celebrations contributes to the holistic development of learners.

With a strong emphasis on skill development, innovation, employability, and higher education, the Department of Computer Engineering at GPT Proddatur continues to prepare students to meet the challenges of the digital world and contribute effectively to technological growth and societal development.

# PROGRAM EDUCATIONAL OUTCOMES(PEOS)

**PEO<sub>1</sub>**

- To produce best diploma students as computer engineering technicians by correlating growing need of the industries in modern topics with the academic input and giving the technical knowledge for further learning and to provide better career in this field.

**PEO<sub>2</sub>**

- To prepare the students as productive computer engineers, possessing, supportive and leadership skills in multi disciplinary domain expertise in practical orientation, communication skills and latest developments.

**PEO<sub>3</sub>**

- To give the depth of related skills and expertise in a single field and the ability to collaborate with other disciplines and work at the supervisory cadre.

**PEO<sub>4</sub>**

- To promote the students in professionalism, by successful completion of the Diploma in Computer Engineering by emphasizing field practice in industry oriented activities.

**PEO<sub>5</sub>**

- To sensitize the students on social and economic commitment and to inculcate a nature to guard the values of community and protect environment

# ISRO SRIHARIKOTA



## **Industrial Visit to ISRO Sriharikota - July 2024**

Students of the CME Department, Government Polytechnic Proddatur visited ISRO Sriharikota in July 2024 as part of their industrial exposure program. This educational visit aimed to provide students with practical knowledge about space technology and satellite launching processes.

During the visit, students learned about rocket assembly, launch procedures, and advanced space research activities. Scientists and officials explained the working of launch vehicles and the importance of space missions for national development.

The visit inspired students and increased their interest in science and technology. It also helped them understand real-time industrial applications of their academic subjects.

This industrial visit was a memorable and motivating experience for all the students.



## INDUSTRIAL VISIT 2024



The industrial visit to ISRO Sriharikota was well organized and successfully coordinated by the faculty members of the CME Department, Government Polytechnic Proddatur. From the beginning of the journey till the return, every arrangement was carefully planned to ensure safety, discipline, and comfort of the students. Transportation, accommodation, food, and visit schedules were efficiently managed, which helped the students focus on learning and enjoying the experience. The faculty members continuously guided the students and maintained proper supervision throughout the trip.

Students actively cooperated, followed instructions responsibly, and maintained discipline during the entire visit. Their positive attitude and teamwork played a key role in making the trip smooth and memorable. After completing the industrial visit, the students visited the Sriharikota temple for darshan, which added a spiritual and cultural value to the educational tour. This visit provided peace of mind and a sense of gratitude among the students.

Overall, the trip was a perfect blend of education, discipline, and cultural exposure. It taught students the importance of time management, teamwork, responsibility, and respect. We sincerely thank the management and faculty members for their constant support and guidance in organizing such a valuable and inspiring industrial visit. This experience will remain a memorable milestone in our academic journey.

# SRI KALA HASTI TEMPLE VISIT

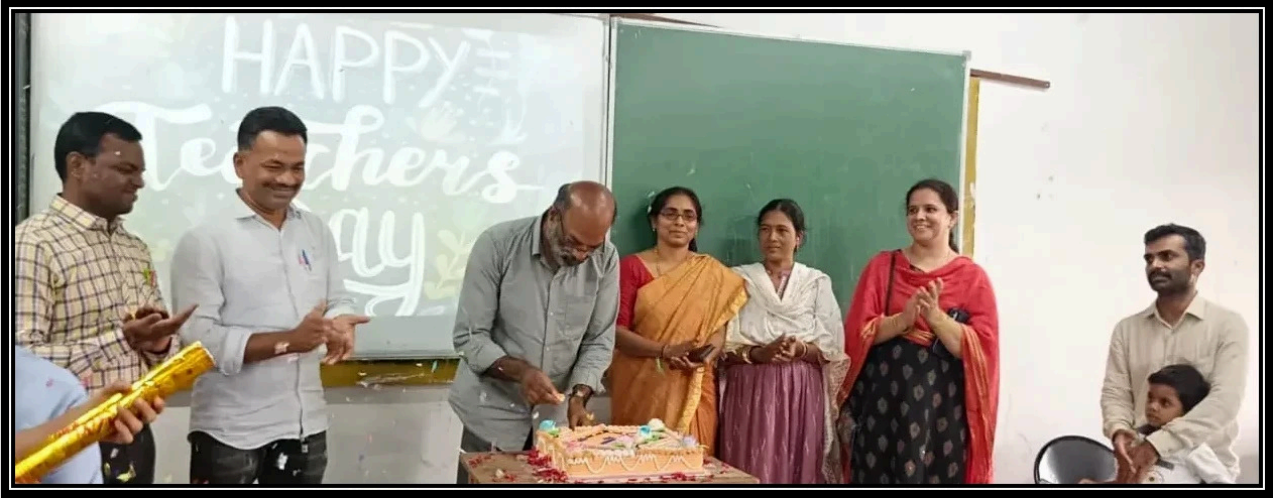


After the successful completion of the industrial visit to ISRO Sriharikota, the students visited the famous Sriharikota temple and had a peaceful darshan. This spiritual visit brought a sense of calmness and positivity among the students. They offered prayers and expressed gratitude for the opportunity to witness India's space achievements.

The temple visit added a cultural and spiritual touch to the educational trip.

After completing both the industrial and spiritual visits successfully, all students returned safely with joyful memories, valuable knowledge, and a sense of inspiration for their future careers.

# TEACHERS DAY 2024



## Teachers' Day Celebration – 2024

Teachers' Day was celebrated with great joy and respect at Government Polytechnic, Proddatur in 2024. The program was organized by the students to express their gratitude and appreciation towards their beloved teachers for their constant guidance and support.

The celebration began with a warm welcome and inspiring speeches highlighting the role of teachers in shaping students' future. A cake-cutting ceremony was conducted, creating a joyful and memorable atmosphere. Students and staff shared smiles, laughter, and heartfelt moments during the celebration.

Faculty members appreciated the efforts of the students and encouraged them to work hard and achieve their goals. The event strengthened the bond between teachers and students and reminded everyone of the noble profession of teaching.

The Teachers' Day celebration concluded on a happy note, leaving behind beautiful memories and a sense of respect and gratitude for all educators.

Teachers' Day is a special occasion to honor and appreciate our respected teachers for their dedication and commitment to shaping our lives. Their guidance, patience, and encouragement inspire us to achieve our goals. We are grateful to all our teachers for their invaluable contribution to our education and future.



## STUDENTS PRESENT GIFTS TO FACULTY



As part of the Teachers' Day celebrations 2024 at Government Polytechnic, Proddatur, students expressed their gratitude by presenting gifts to their respected faculty members. This gesture symbolized love, respect, and appreciation for their continuous guidance and support.

The moment was filled with joy as students personally handed over gifts to their teachers, thanking them for their dedication and encouragement. Faculty members were touched by the thoughtful gesture and appreciated the students' efforts.

This event strengthened the bond between teachers and students and made the celebration more meaningful and memorable.





# GANESH CHATURTHI



The CME Department of Government Polytechnic, Proddatur organized a Ganesh Chaturthi program in 2024 to observe the auspicious occasion in a meaningful way. The event was conducted to create awareness about Indian traditions and to develop moral values among students.

Faculty members and students gathered to perform traditional rituals and offer prayers to Lord Ganesh. The idol was artistically decorated, creating a peaceful and positive environment within the department. Students sought blessings for academic progress and personal development.

The program helped in strengthening unity and respect for cultural heritage. Distribution of prasad added warmth to the occasion and encouraged interaction among students and staff.

Through this celebration, students learned the importance of patience, dedication, and optimistic thinking. The event concluded successfully, leaving behind a memorable experience for everyone.

## GANESH CHATURTHI 2K24



The celebration of Ganesh Chaturthi taught us many valuable life lessons. Lord Ganesh is known as the remover of obstacles, and through this festival, we understood the importance of facing challenges with courage and confidence. It reminded us that every problem in life can be overcome with patience, hard work, and a positive mindset.

We also learned the value of discipline and dedication by actively participating in the arrangements, pooja, and celebrations. Working together as a team helped us realize the importance of cooperation and mutual respect. The event encouraged us to respect our traditions and understand the cultural significance behind festivals.

Ganesh Chaturthi also taught us humility and gratitude. By offering prayers, we learned to be thankful for what we have and to seek blessings for a better future. The peaceful atmosphere created during the celebration helped us stay calm and focused, especially in our academic life.

Overall, this festival inspired us to develop good habits, maintain unity, and spread positivity wherever we go. It encouraged us to stay determined, respect elders, and work sincerely towards our goals. This experience will remain a memorable and meaningful part of our student life.



# IPSGM 2024



The IPSGM 2024 District Level competitions were successfully conducted at Government Polytechnic, Proddatur. Students from various polytechnic colleges across the district actively participated in this prestigious event.

The program aimed to encourage sportsmanship, leadership, and teamwork among students. Various indoor and outdoor games were organized, and students showcased their talent, discipline, and competitive spirit.

The Principal, faculty members, and organizing committee worked with great coordination to ensure the smooth conduct of the event. The participants appreciated the arrangements and hospitality provided by GPT Proddatur.

This event created a healthy competitive environment and motivated students to participate in sports and extracurricular activities for overall development.

## IPSGM 2K24



The District Level IPSGM Games were successfully organized for two days with the valuable support of RCPE (Rayalaseema College of Physical Education). The events were conducted at the RCPE College grounds, providing excellent sports facilities and professional guidance. The main objective of this program was to promote physical fitness, sportsmanship, and healthy competition among polytechnic students. Students from various polytechnic colleges across the district participated

enthusiastically in these competitions. The students of Government Polytechnic, Proddatur showed outstanding participation and commitment throughout the event. They competed in different sports events and demonstrated remarkable discipline, teamwork, and determination. Their energetic performance and positive attitude reflected their strong sports spirit.

A special appreciation goes to the CME Department student volunteers who played a crucial role in the smooth conduct of the games. They supported the organizing committee by managing registrations, guiding participants, arranging grounds, and maintaining discipline. Their dedication, responsibility, and leadership skills were clearly visible during the entire program.

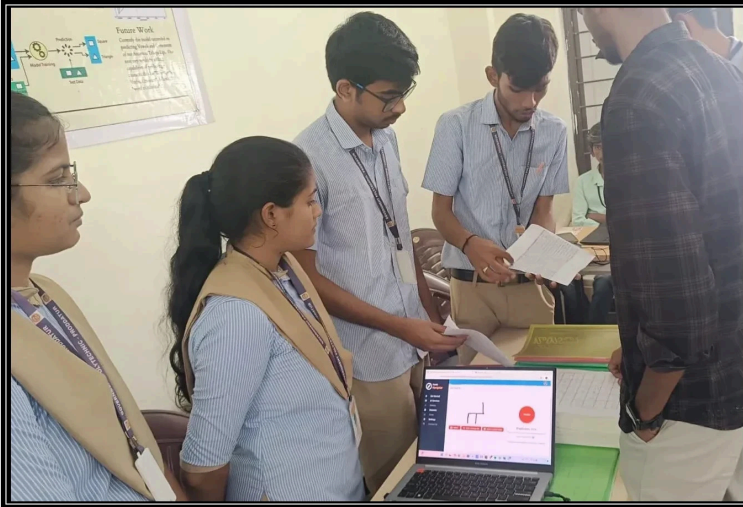
The organizing committee, faculty members, and participants from other colleges highly appreciated the sincere efforts of the CME volunteers. Their service-oriented approach and cooperative nature helped in maintaining a friendly and well-organized environment throughout the event.

This two-day sports meet not only enhanced the physical abilities of students but also helped them develop important life skills such as teamwork, time management, leadership, and confidence. The event concluded successfully, leaving behind wonderful memories and valuable experiences for all participants.

Government Polytechnic, Proddatur takes pride in its students and volunteers for their active involvement and contribution to the grand success of the IPSGM District Level Games. This event truly highlighted the importance of sports in overall personality development.



# TECH FEST 2024



## REGIONAL POLYTECH FEST 2024

### PARTICIPANTS:

- Pallavi(22022-CM-001)
- Vedeshwar Reddy(22022-CM-008)
- Akhilandeswari(22022-CM-052)
- Hem Pradeep(22022-CM-053)

Students of the CME Department, Government Polytechnic Proddatur actively participated in Polytech Fest 2024 held at Rajampeta. This inter-polytechnic event provided a great platform for students to showcase their technical skills, creativity, and talents.

CME students took part in various technical and cultural competitions and performed excellently. Their participation reflected confidence, innovation, and teamwork. The event encouraged healthy competition and knowledge sharing among students from different colleges.

Faculty members guided and encouraged the students throughout the fest. The exposure helped students gain experience, confidence, and motivation to excel in their academics and extracurricular activities.

The CME Department is proud of its students for representing GPT Proddatur at Polytech Fest 2024 and bringing honor to the institution.

Participating in Polytech Fest 2024 at Rajampeta gave CME students a valuable opportunity to showcase their talents and technical skills. The event enhanced our confidence, teamwork, and competitive spirit. We are grateful to our faculty for their guidance and support.



# WORKSHOP



## Workshop on Cyber Security and Ethical Hacking

The CME Department, Government Polytechnic Proddatur organized an insightful workshop on Cyber Security and Ethical Hacking conducted by Mr. Bichukathula Obulesu, CEO of Cyber Saviours Pvt Ltd. The workshop aimed to provide students with knowledge about protecting digital assets and understanding ethical hacking principles.

During the session, students learned about cyber threats, security measures, ethical hacking techniques, and best practices for safe online activities. Mr. Obulesu also shared real-world case studies, which helped students understand the practical aspects of cyber security.

The workshop enhanced students' awareness about digital safety and inspired them to explore the field of ethical hacking. Faculty members appreciated the initiative and encouraged students to apply their learning for future career opportunities.



**B. Obulesu CEO of Cyber Saviours**



# CLEAN AND GREEN



The students of the CME Department, Government Polytechnic Proddatur actively participated in a Clean & Green drive to protect the environment. They cleaned the campus surroundings and removed plastic waste. Saplings were planted to promote greenery and reduce pollution.

This program created awareness about environmental protection and inspired students to follow eco-friendly practices in their daily lives.

With a strong sense of responsibility, CME students organized a Clean & Green program at the college campus. Students cleaned public areas, segregated waste, and planted trees.

The initiative taught students the importance of cleanliness and sustainable living. Their efforts contributed to a healthier and greener environment.

This program encouraged students to adopt eco-friendly habits and understand their responsibility towards the environment. The CME Department appreciates the students for their sincere efforts in making the campus clean and green.



# **Machine Learning: Teaching Computers to Learn**

*By: Department of Computer Engineering*

**Authors: Agile Pallavi (22022-CM-001), Thummala Hem Pradeep Royal (22022-CM-053)**

## **Abstract**

Machine Learning (ML) is a branch of Artificial Intelligence that enables computer systems to learn from data and improve their performance without being explicitly programmed. By analyzing patterns in data, machine learning models can make predictions, classifications, and decisions. This paper explains the fundamentals of machine learning, its types, working process, applications, challenges, and future scope in a simple yet technical manner suitable for diploma students.

## **1. Introduction**

Traditional computer programs work on fixed instructions. In contrast, Machine Learning systems learn from data and adapt automatically.

For example:

- Email spam filters learn from past messages
- Recommendation systems learn from user behavior
- Face recognition learns from image data
- Machine Learning plays a major role in modern technologies such as:
  - Artificial Intelligence
  - Data Science
  - Internet of Things
  - Cyber Security
  - Smart Applications

## **2. What is Machine Learning?**

Machine Learning is the process of:

- Collecting data
- Training a model
- Making predictions
- Improving accuracy over time

Instead of coding rules manually, the system learns patterns from data.

### 3. Types of Machine Learning

Type	Description	Example
Supervised Learning	Learns from labeled data	Spam detection
Unsupervised Learning	Finds patterns in data	Customer grouping
Reinforcement Learning	Learns by reward & penalty	Game AI

### 4. Machine Learning Workflow

- 1.Data Collection
- 2.Data Preprocessing
- 3.Feature Selection
- 4.Model Training
- 5.Testing & Evaluation
- 6.Prediction
- 7.This cycle helps the model become more accurate.

### 5. Applications of Machine Learning

#### Daily Life

- Voice assistants
- Face unlock
- Recommendation systems

#### Healthcare

- Disease detection
- Medical image analysis

#### Industry

- Predictive maintenance
- Quality control

#### Transportation

- Self-driving systems
- Traffic prediction

#### Cyber Security

- Intrusion detection
- Fraud prevention



6. Common Machine Learning Algorithms

Algorithm	Purpose
Linear Regression	Prediction
Decision Tree	Classification
K-Nearest Neighbor	Pattern recognition
Naïve Bayes	Text classification
Neural Networks	Image & speech tasks

7. Advantages of Machine Learning

Benefit	Explanation
Automation	Reduces manual work
Accuracy	Improves predictions
Speed	Faster data analysis
Adaptability	Learns continuously

8. Challenges in Machine Learning

Challenge	Impact
Data quality	Affects accuracy
High computation	Needs powerful hardware
Bias in data	Unfair results
Security risks	Model misuse

## 8. Challenges in Machine Learning

Challenge	Impact
Data quality	Affects accuracy
High computation	Needs powerful hardware
Bias in data	Unfair results
Security risks	Model misuse

## 9. Machine Learning Tools

Popular ML tools include:

- Python
- TensorFlow
- Scikit-Learn
- Keras
- Google Colab
- These tools help students build ML projects easily.

## 10. Machine Learning and Future Scope

In the future, ML will power:

- Smart healthcare
- Intelligent robots
- Automated industries
- Smart cities
- Personalized education

**Career roles include:**

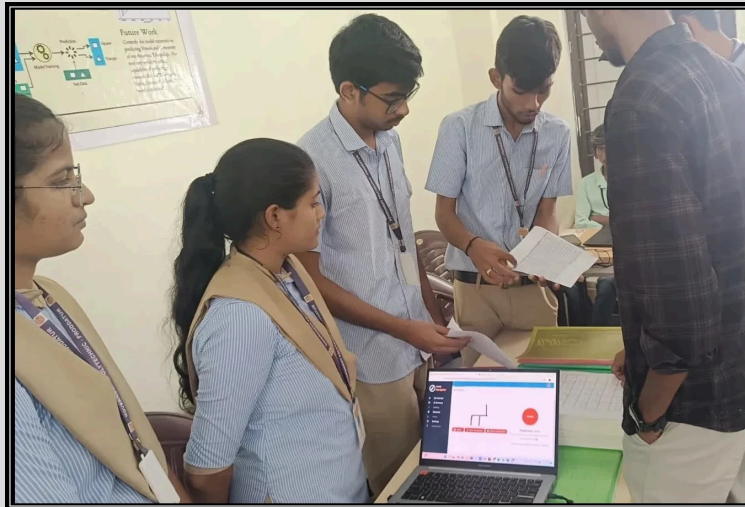
- ML Technician
- Data Analyst
- AI Engineer
- Software Developer

## Conclusion

Machine Learning is transforming the digital world by enabling computers to learn from data and make intelligent decisions. For diploma students, understanding ML opens doors to advanced technologies and future careers in AI and data-driven systems.









**తెలుగు వర్ణమాలలో ఒక్కొక్క అక్షరాన్ని..**

**అమ్మవారి అలంకారాల్లో దర్శించిన జొన్నవిత్తుల రామలింగేశ్వరరావు గారి రచన ఇది.**

అద్దమంటి “అ-ఆ”లు అమ్మవారి చెక్కిళ్ళు -

తల్లి బుగ్గ నిమిరినట్లు దిద్దుతారు పిల్లవాళ్ళు  
ఆమె చేతిలోని చిలుక “ఇ” :: ఇంకొకచేతి జపమాల “ఈ”  
జ్ఞానమొసగు పుస్తకాలు “ఉ-ఊ”లు :: హంసవాహనాలు “ఋ” “ౠ”లు  
“ౡ-ౢ” “ఎ-ఏ-ఐ” | “ఒ-ఓ-ఔ” ముంగురులు  
వీణా శృతులే “అం-అః” :: తెలితామర పీఠమే “అ”  
పాదాలకు పారాణి “ఆ” :: వొంకుల వడ్డాణమే “ఇ”  
వజ్రపుటుంగరమే “ఉ”  
“య-ర-ల-వ”లు “శ-ష-స-హ”లు పాదాలకు మువ్వలు

“జ-ఞ-న్-ం” చిరు నవ్వుడులు

చెవులకు రవ్వల దుద్దులు “ధ-ధ” :: తన ముంగిట జయ గంట “ఢ”  
ముత్యపు ముక్కుపోగు “ట” :: నవ్వి నపుడు బుగ్గ సొట్ట “ఠ”  
గాజుల గల గల లే “చ-ఛ-జ-ఝ” :: వన్నెల అరవంకిలే “డ-డ”  
సువర్ణ కిరీటమే “గ” :: సిగను విరియు మల్లెరెమ్మ “త”  
సుందర సుధానదీ గమనమే “క” :: పురివిప్పిన పెంపుడు నెమలి “ఖ”  
జయ శంఖారవములే “ప” “ఫ” “బ” “భ”  
నుదుట వెలుగు చంద్ర రేఖ “అరసున్న”



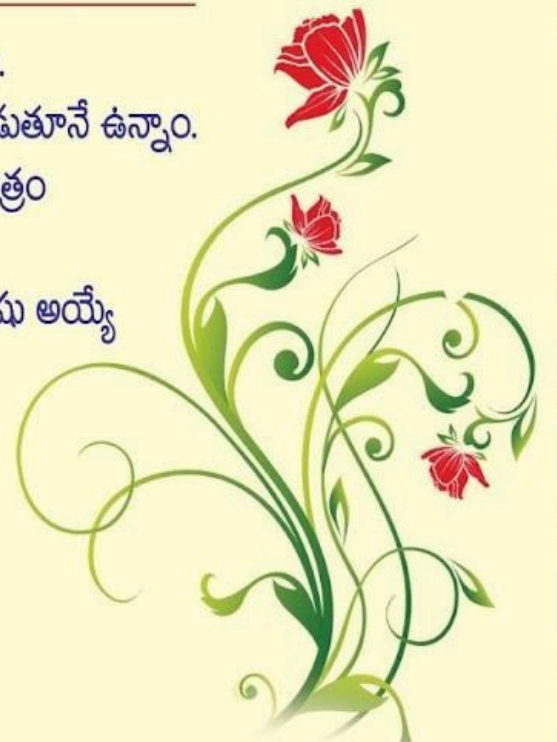
లోకంలో లిపిలేని భాషలెన్నో మన కళ్ళముందే మట్టికొట్టుకుని పోయాయి.  
లిపి ఉండి...వాడక అంతరించిపోయిన భాషల గురించి కూడా బాధపడుతూనే ఉన్నాం.  
తెలుగు భాష ఎప్పటికీ చావక పోవచ్చు కానీ...తెలుగు లిపి మనుగడ మాత్రం  
పెను ప్రమాదంలో ఉంది.  
ఇంకో వందేళ్లు, రెండు వందల ఏళ్ళయ్యాక... తెలుగు భాష లిపి, ఇంగ్లీషు అయ్యే  
అక్షర విషాదం కనపడుతోంది.

**మూలం :**

**రచయిత : పమిడి కాల్య మధుసూదన్**

**విధాత్రి**

అవి - ఇవి - అన్ని







“WHEN CURIOSITY  
IS OPEN AND  
EFFORT IS SINCERE,  
EXPERIENCE  
BROADENS  
LEARNING”

