



**ADITYA**  
UNIVERSITY

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ACCREDITED BY  
**NAAC**  
**A++** GRADE

**NBA**  
**TIER 1**  
ACCREDITED

**A**DITYA  
**L**EARNING  
**A**CADEMY

(Centre for Teaching & Learning)

# **ANNUAL REPORT**

## **2024-25**



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## **1. Aditya Learning Academy (Centre for Teaching & Learning), Aditya University**

A Centre for Teaching & Learning at Aditya University under the name “ADITYA LEARNING ACADEMY (ALA)” established in 2024 to enhance Teaching & Learning, support curriculum development, foster Collaborative partnerships, expand Digital educations, and perform several other functions that facilitate Aditya University to be a leader in educational innovation and faculty development.

### **Vision**

To be a leader in educational innovation and faculty development, fostering an environment where teaching excellence and learner success converge through collaboration, technology, and research.

### **Mission**

The Centre for Teaching and Learning at Aditya University is dedicated to improving the quality and effectiveness of teaching across disciplines. We assist professors via thorough professional development, promote new teaching approaches, and foster collaborations with global universities and industry leaders to prepare students for tomorrow's issues.

### **Objectives**

- Enhance Teaching and Learning
- Support Curriculum Development
- Foster Collaborative Partnerships
- Expand Digital Education
- Encourage Research and Scholarship
- Deliver Targeted Professional Development

### **ALA Team Members**

1. Dr. I Veeranjaneyulu – Coordinator, Assistant Professor, Dept. of ME
2. Dr. P Vijaya Kumar-Associate Professor, Dept. of ECE
3. Mr. N. Rajesh-Assistant Professor, Dept. of EEE
4. Mr. G. Sivasankar-Assistant Professor, Dept. of AIML
5. Mrs. S. Neelima-Assistant Professor,Dept. of IT
6. Mrs. N. Akhila-Assistant Professor,Dept. of CSE

## 2. Courses Conducted

A total of 8 Online Certification Courses/ Lecture Series were conducted across various disciplines in A.Y. 2024-25. The details of the courses are given below:

### List of Online Certification Courses/Lecture Series

S.No.	Title	Schedule	Associated Dept./Institution
1	Machine Learning and Gen AI	05/08/2024 to 16/08/2024	CSE, IEduVibhu
2	Data Visualization with Power BI & Tableau	23/09/2024 to 04/10/2024	AI&ML
3	Emerging Trends of Research in Electrical Engineering	06/11/2024 to 16/11/2024.	EEE
4	AI Tools	23/12/2024 to 28/12/2024	CSE
5	Research Scope in Emerging Areas of Civil Engineering	21/01/2025 to 31/01/2025.	CE
6	Digital hardware Engineering with FPGA	19/02/2025 to 25/02/2025	ECE
7	Harnessing Bigdata: Business Analytics with Oracle Database	10/03/2025 to 15/03/2025	CSE, IEduVibhu
8	Design for 3D Printing	17/03/2025 to 22/03/2025	ME

### **3. Online Certification Course on Machine Learning and GenAI**

**Date:** 05/08/2024 to 16/08/2024

**Duration:** 10 Days

**Resource Person:** Dr. Suneetha Racharla

**No. of Participants:** 1560

**ALA in association with:** Dept. of AI&ML, IEduVibhu

#### **Introduction:**

The certification course on Machine Learning and GenAI is designed to equip educators and researchers with cutting-edge knowledge and practical skills in these transformative fields. This intensive program delves into the foundational concepts and advanced techniques of machine learning, covering supervised, unsupervised, and reinforcement learning, as well as specialized generative models such as Generative Adversarial Networks (GANs). Participants will engage in hands-on sessions using popular frameworks like TensorFlow to develop and deploy machine learning models and explore the creation of new data through generative AI applications in images, text, and audio. The program also emphasizes ethical considerations, encouraging participants to address issues of bias, fairness, and privacy in AI. Through collaborative projects and research initiatives, attendees will gain the expertise to innovate and contribute to the rapidly evolving landscape of artificial intelligence, preparing them to inspire and educate the next generation of AI practitioners.

#### **Details of the Program:**

The main purpose of the program is to make students Learn about Machine Learning, Deep Learning, generative models and GANs. It develops the skills in machine learning world. Program Schedule of the course as follows:

##### **Day-1(05-08-2024)**

Introduction to Data Preprocessing, Data Collection, Data Cleaning, Data Transformation, Data Reduction, Outlier Detection, Data Visualization.

##### **Day-2 (06-08-2024)**

Machine Learning Fundamentals, Advantage of ML over traditional Programming, Applications of ML, Issues with ML, Types of ML-Supervised- Few algorithms.

**Day-3 (07-08-2024)**

Unsupervised and Reinforcement Learning – Few algorithms.

**Day-4 (08-08-2024)**

verfitting and Underfitting, Bias, Variance, PCA, Gradient Descent.

**Day-5 (09-08-2024)**

Q & A Session

**Day-6 (12-08-2024)**

Fundamentals about Deep Learning, How Deep Learning different from Machine Learning, Scalars. Vectors. Matrixes, Higher Dimensional Tensors. Manipulating Tensors. Vector Data. Hyper parameters Vs Parameters.

**Day-7 (13-08-2024)**

Activation function, Loss Function, Regularization - Introduction to Keras and TensorFlow. About Neural Network. Building Blocks of Neural Network.

**Day-8 (14-08-2024)**

Introduction to Neural Networks, Feed-forward Networks, Hidden Units, Back-propagation, CNN, RNN.

**Day-9 (15-08-2024)**

Introduction to generative models, Basics of GANs: generator, discriminator, Training GANs: adversarial training, Variants of GANs: Conditional GANs, Wasserstein GANs, etc., and data augmentation.

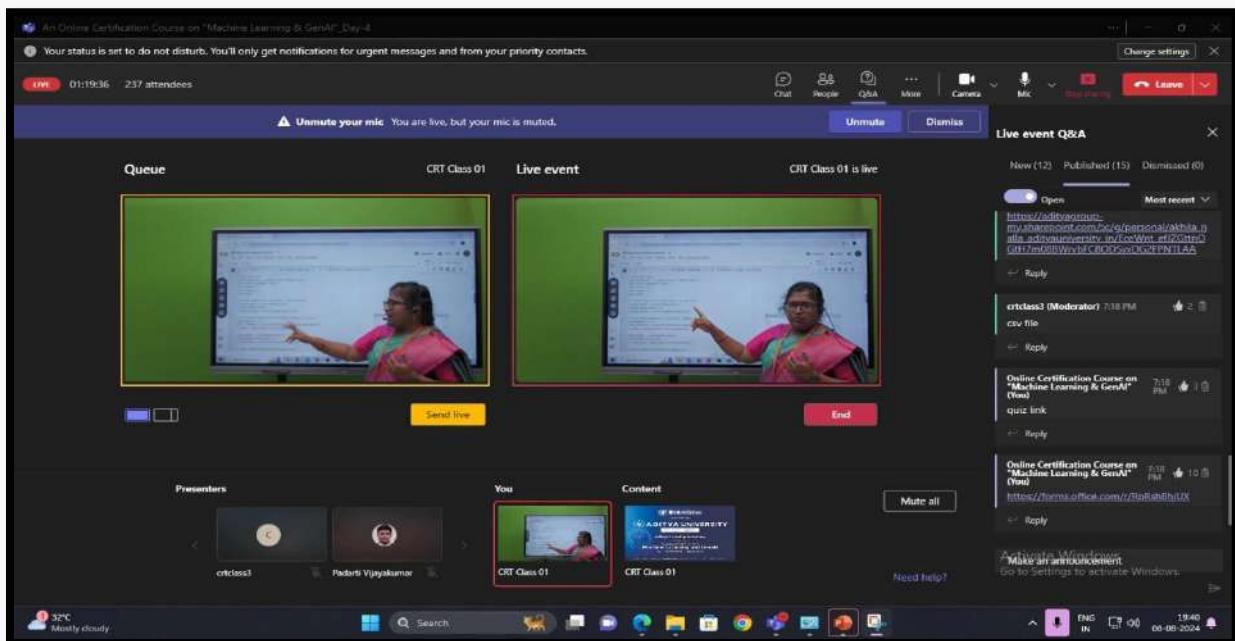
**Day-10 (16-08-2024)**

Q & A Session & Online Examination

**Outcomes of the Program:**

- Demonstrate a comprehensive understanding of the basic principles and concepts of Data Preprocessing, machine learning, including supervised, unsupervised, and reinforcement learning.
- Explain the theoretical underpinnings of Generative AI, including various models such as Generative Adversarial Networks (GANs)
- Apply machine learning algorithms to real-world datasets, including data preprocessing, feature selection, model training, evaluation, and tuning.
- Utilize popular machine learning frameworks and tools, such as Scikit-learn, TensorFlow, and PyTorch, to develop and deploy machine learning models.

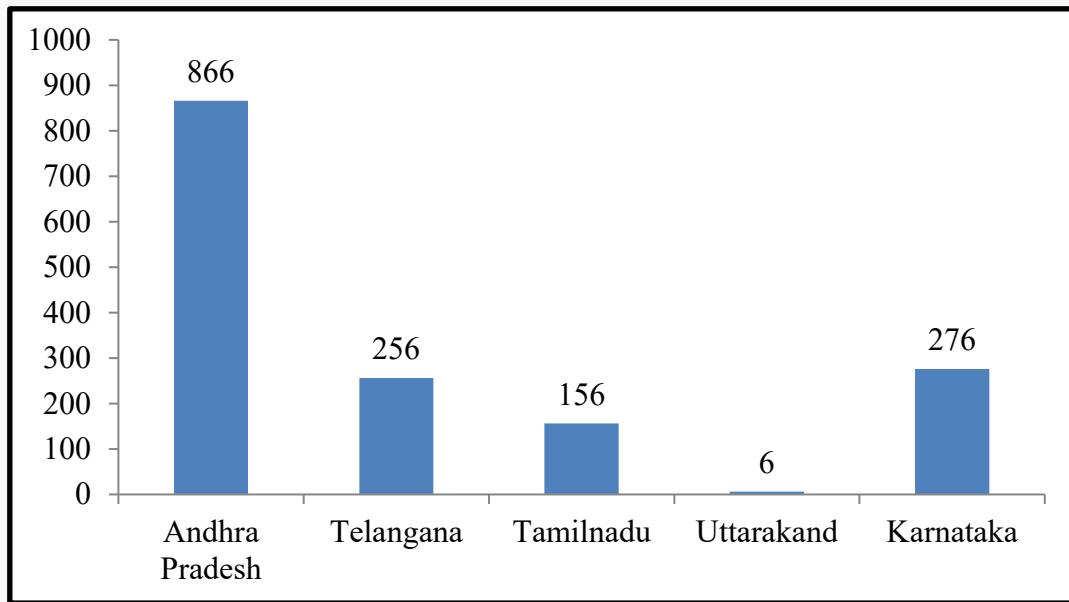
## Photo Gallery:



## Media Publication:



## Registered Participants:



## Feedback from Students:

The Machine Learning and GenAI Certification Course was an eye-opening journey into the world of intelligent systems. The hands-on sessions and real-world projects made complex concepts easier to grasp and apply. The interactive learning environment sparked curiosity, collaboration, and innovation among participants. Students valued the opportunity to enhance their technical skills and gain industry-relevant knowledge. The feedback has been overwhelmingly positive, with many eagerly looking forward to advanced modules and future tech-driven initiatives!

#### **4. Online Certification Course on Data Visualization with Power BI & Tableau**

**Date:** 23/09/2024 to 04/10/2024

**Duration:** 10 Days

**Resource Person:** Dr. Maganti Venkatesh

**No. of Participants:** 520

**ALA in association with:** Dept. of AI&ML

##### **Introduction:**

In the age of big data, organizations are collecting more information than ever before—but raw data alone holds little value without the ability to interpret and communicate it effectively. This is where data visualization plays a vital role.

Power BI and Tableau have emerged as industry-leading tools that enable users to turn complex data sets into interactive, insightful, and visually compelling dashboards and reports. These tools empower decision-makers across various sectors to explore trends, identify patterns, and make data-driven decisions with confidence.

##### **Details of the Program:**

The main purpose of the program is to make students Learn about Data Visualization and Power BI and also working of Tableau. It develops the Usage of PowerBI and workspaces of Tableau.

Program Schedule of the course as follows:

###### **Day-1 (23-09-2024)**

Introduction to Data Visualization and Power BI, Features, Components and Services

###### **Day-2 (24-09-2024)**

Creation of Charts and Graphs in Power BI

###### **Day-3 (25-09-2024)**

Data Models in Power BI

###### **Day-4 (26-09-2024)**

DAX Functions in Power BI

### Day-5 (27-09-2024)

Data Modeling and Power BI Dashboard

#### Tableau Topics

### Day-6 (28-09-2024)

Tableau Workspace and Stories in Tableau

### Day-7 (30-09-2024)

Data Preparation and Creating Charts in Tableau

### Day-8 (01-10-2024)

LOD Expressions in Tableau

### Day-9 (03-10-2024)

Filters in Tableau

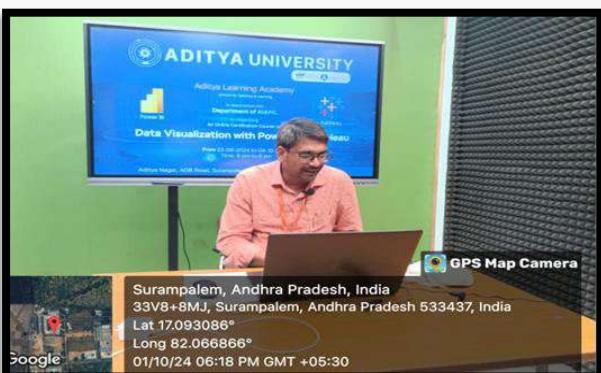
### Day-10 (04-10-2024)

Tableau Dashboards

## Outcomes of the Program:

- Gain proficiency in using Power BI and Tableau to import, clean, and transform raw data into actionable reports.
- Choose the right tool and visualization techniques based on specific business needs and goals.
- Perform data modeling and apply best practices for visual analytics.
- Enhance decision-making skills by applying data storytelling to communicate trends, patterns, and insights to stakeholders.
- Master the creation of interactive dashboards and data visualizations to convey insights effectively.

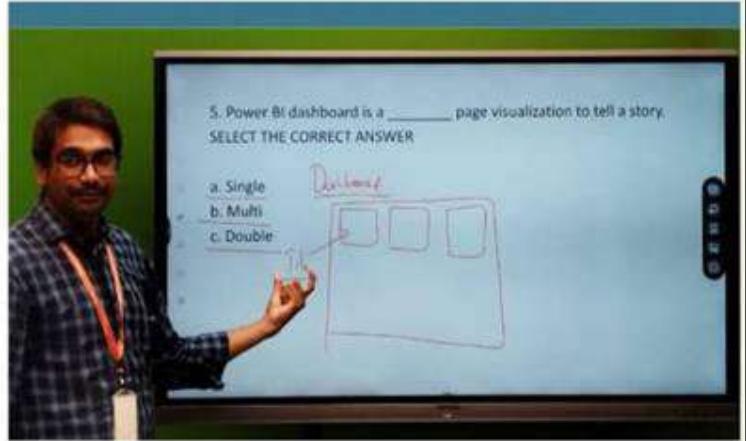
## Photo Gallery:



## **Media Publication:**

ఆదిత్య యూనివర్సిటీలో దేఱా విసులైజెషన్ విత్ పవర్ B1 & టేబ్లూ' ఆన్ని సర్టిఫికేషన్ ప్రోగ్రాం మనంగా ప్రారంభమైంది

సెప్టెంబర్ ప్రతినిధి



డेटा వినుల్జపన్ విత్ పవర్ BI & టెబ్లూ' ఆన్‌నెన్ సర్పిఫేషన్ ప్రోగ్రామ్  
నిర్మాణమై దుర్భయం

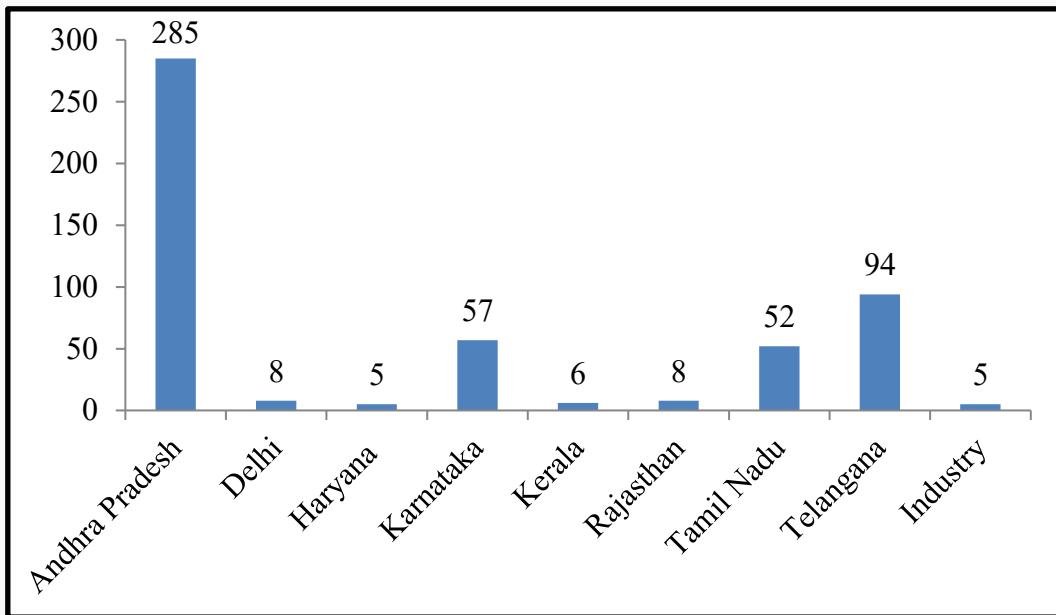
## ఆన్‌లెన్ ప్రోగ్రాం విజయవంతం

**విశాలాంధ్ర - గుండెపర్మి : గుండెపర్మి మండలం**  
 సూరంపాలెం ఆదిత్య యూనివర్సిటీలో ఆధిక్య లెర్నింగ్ అకాడమీ  
 (సింటర్ ఫర్ టీచింగ్ అండ్ లెర్నింగ్), ఏష అండ్ ఎయిల్  
 విభాగం ఆర్ధర్యంలో సంయుక్తంగా నీర్మాణంచినటువంటి 'డేబు'  
 విజావలైషెసన్ విత్ పవర్ బిష అండ్ టేట్లు' అనే ఆశ్వేస  
 సర్టిఫికేషన్ ప్రోగ్రాం విజయవంతంగా ముగిసింది. ఈ  
 ప్రోగ్రాంలో డేబు విజావలైషెసన్ మరియు అశ్వాధునిక పవర్  
 బిష టూల్స్ వాడకాన్ని మరియు సూతన అంతాలలో కూడిన  
 పొలాంకాలను ఎంతో అనుభవం ఉన్నటువంటి, రిసోర్స్ పర్మిన్  
 అయిన దాక్టర్ ఎం వెంకటేష్ భోధించారు. ఈ కార్యక్రమంలో  
 కళాశాల ఉపాధ్యాయులు, విద్యార్థులు, ఇండస్ట్రీల ఎక్స్ప్రైస్  
 పాల్గొన్నారు. ఈ కార్యక్రమంలో యూనివర్సిటీ వైన్ ఛాన్సులర్ దా  
 ఎంచి త్రీనివాన్, ప్రో వైన్ ఛాన్సులర్ అకడమిక్స్ దా ఎన్  
 రమాళ్ళి, రిటిస్టర్ దా జీ సురేష్, కోఆర్డినేటర్ దా ఉ  
 వీరాంజనేయులు, ఇతర అధాపుకులు పాల్గొన్నారు.

‘ಅದಿತ್ಯ’ಲ್ಲಿ ಸಲಿಫಿಕೆಷನ್ ಪ್ರೋಗ್ರಾಂ

గండెవర్లి, అక్కేబరు 4: సూరంపాలెంలోని ఆదిత్య యూని వర్ణటిలో ఆదిత్య లెర్చింగ్ అకాడమీ, ఏపి అండ్ ఎంఎల్ విబాగు ఆర్థర్స్యాలో సంయుక్తంగా నిర్వహించిన దేఱా విజా వరైషేషన్ విత్ పవర్ బీబి, బెట్టూ అనే ఆన్డ్రోస్ స్ట్రిప్టికేషన్ ప్రోగ్రాం ముగిసింది. దేఱా విజావరైషేషన్ అర్చాదునికి పదర్ బీబి బూత్తు వాడకాన్ని సూతన అంశాలతో చూడిన పార్శ్వాలను రిసోర్స్స్స్ పర్కున్ డాక్టర్ ఎం.వెంకట్ బోధించారు.

## Registered Participants:



## Feedback from Students:

The online certification course on Data Visualization using Power BI and Tableau was successfully completed with an overwhelmingly positive response from the students. The structured curriculum, which systematically covered fundamental to advanced topics, enabled participants to develop a strong understanding of both tools. Students particularly appreciated the clarity in teaching complex concepts like DAX functions, LOD expressions, and dashboard building. The practical, hands-on approach throughout the course made learning interactive and highly applicable to real-world scenarios. Overall, the feedback highlighted the course's effectiveness, well-paced delivery, and the significant skills gained during the sessions.

## 5. Online Lecture Series on "Emerging Trends of Research in Electrical Engineering

**Date:** 06/11/2024 to 16/11/2024

**Duration:** 10 Days

**Resource Person:** Dr. V. Srinivasa Rao, Dr. K. Bapayya Naidu, Dr. N. Ram Babu

**No. of Participants:** 135

**ALA in association with:** Dept. of E.E.E.

### Introduction:

This course is designed to equip educators and researchers with cutting-edge knowledge and practical skills in these transformative fields. This intensive program delves into the foundational concepts and advanced techniques of Electrical engineering, a cornerstone of modern technological advancement, continues to evolve rapidly, driven by innovations in technology, materials science, and computational methods. As the world increasingly relies on smart systems, sustainable energy, and advanced communication networks, the field of electrical engineering is expanding its frontiers to address complex global challenges. Emerging research trends in electrical engineering focus on areas such as renewable energy technologies, smart grids, Internet of Things (IoT), artificial intelligence (AI) and machine learning (ML) applications.

### Details of the Program:

The main purpose of the program is to make students Learn about Emerging research trends in electrical engineering focus on areas such as renewable energy technologies, smart grids, Internet of Things (IoT), artificial intelligence (AI) and machine learning (ML) applications.  
Program Schedule of the course as follows:

#### **Day-1 (06-11-2024)**

Introduction to MATLAB and modeling controllers prospective

#### **Day-2 (07-11-2024)**

Studies on Automatic Generation Control System

#### **Day-3 (08-11-2024)**

Concepts of Virtual Power Plant

**Day-4 (09-11-2024)**

Role of optimization Techniques in electrical Engineering

**Day-5 (11-11-2024)**

Effective controls schemes of BLOC Motor drive for EV applications

Module-1: Mathematical Modelling and Conventional Controller

**Day-6 (12-11-2024)**

Module-2: A converter topology for power factor correction

**Day-7 (13-11-2024)**

Module-3: Speed control of BLOC Motor using Fuzzy Logic Controller

**Day-8 (14-11-2024)**

Modelling of FACTS Devices

Module-1: Optimal Placement of TCSC and TCPAR

**Day-9 (15-11-2024)**

Module-2: Optimal Placement of UPFC and IPFC

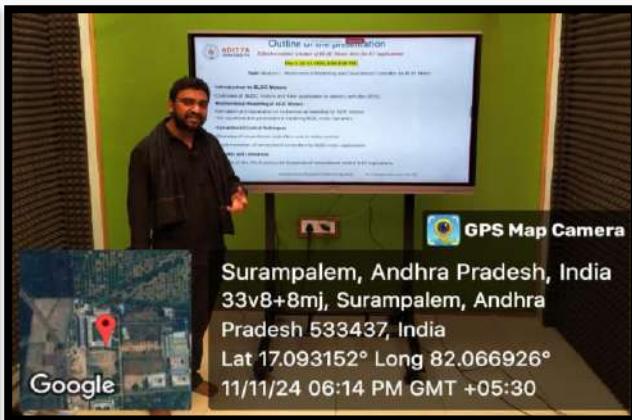
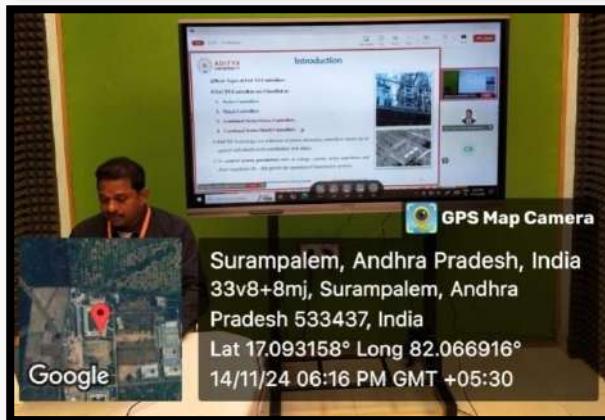
**Day-10 (16-11-2024)**

Module-3: Parameter setting of TCSC, TCPAR and UPFC

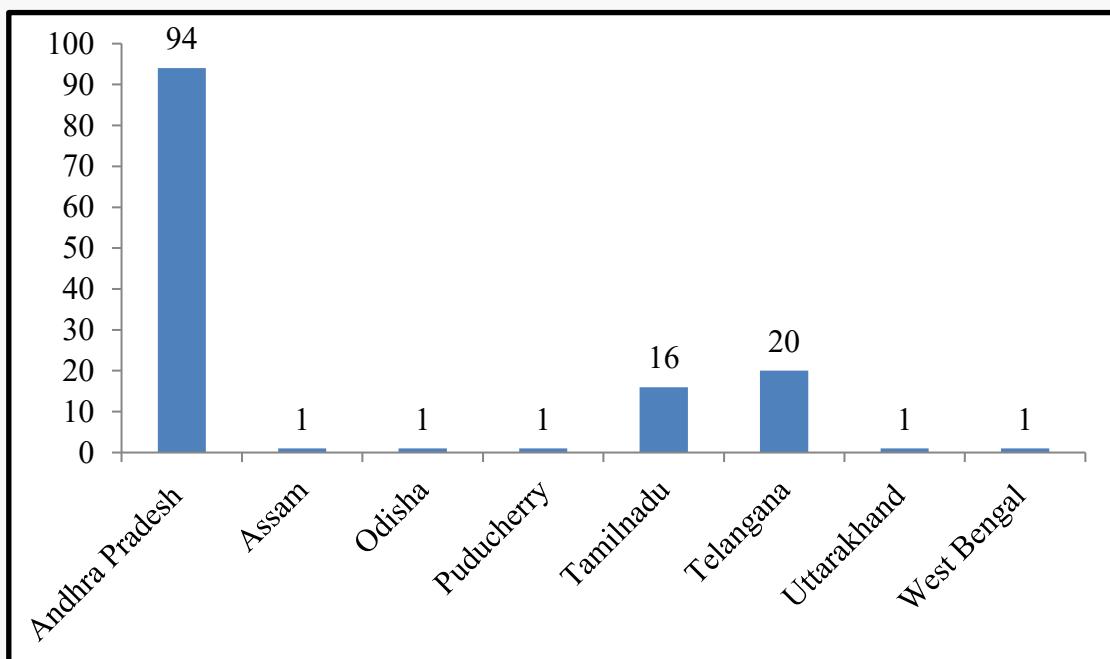
**Outcomes of the Program:**

- Identify and Analyze Emerging Trends
- Evaluate the Impact of Technological Innovations
- Apply Interdisciplinary Approaches
- Develop Problem-Solving Skills
- Conduct Research and Stay Current
- Communicate Technical Concepts Effectively
- Ethical and Sustainable Engineering Practices

## Photo Gallery:



## Registered Participants:



## **Media Publication:**

ఎలక్ట్రికర్ ఇంజనీరింగ్‌లో  
అభివృద్ధిపై పరిశోధనలు అవసరం

ఆన ప్రతిభ్రవి / గండెపథ్రి మండలం

సూర్యాంపాతం లోని ఆచిత్ర యూనివెర్సిటీలో ఆదిత్య రెసర్చ్ ఐంస్టిట్యూట్ అకాడమి (సిఎస్‌ఐ) పరియు ఎలక్ట్రికర్ అండ్ పెర్ఫొర్మాన్స్ ఇంజనీరింగ్ విభాగం సంయుక్త అధ్యయనంలో విస్తరించుస్తు ఎలక్ట్రికర్ ఇంజనీరింగ్ లో కాజూ పరిశోధన ప్రపంచులు అనే ఆస్ట్రేలిక్ క్లౌడ్ ప్రారంభమయి అనిహిత్యాదీ ప్రోగ్రామ్లో ఎలక్ట్రికర్ ఇంజనీరింగ్ లో కాజూ పరిశోధనలు, సాతన సాంబంధిక పరిశ్యాసం పంచి విధి అంకాలాషై అనుభవం గల నివ్వులలే ఉన్నాసాలు ఉండాలయిని పరిశ్యాసం. ఈ కార్బూక్యూమంలో దాక్షర్ ఎన్. రాయలు, దాక్షర్ కె. బూమయ్ నాయుడు, మరియు డాక్షర్ వి. క్రీవినాన రాఘ్వ తము అనుభవాలతి కూడిన ప్రసంగాలు విశ్వార్థావక ఎంతో ఉపయోగికరంగా ఉండాలయిని అని తెలిపారు. ఈ ప్రోగ్రామ్లో ఎలక్ట్రికర్ ఇంజనీరింగ్ లో కాజూ పరిశోధనలు, సాతన సాంబంధిక పరిశ్యాసం పంచి విధి అంకాలాషై అనుభవం గల నివ్వులలే ఉన్నాసాలు ఉండాలయిని పరిశ్యాసం. ఈ కార్బూక్యూమంలో దాక్షర్ ఎన్. రాయలు, దాక్షర్ కె. బూమయ్ నాయుడు, మరియు డాక్షర్ వి. క్రీవినాన రాఘ్వ తము అనుభవాలతి కూడిన ప్రసంగాలు విశ్వార్థావక ఎంతో ఉపయోగికరంగా ఉండాలయిని అని తెలిపారు. ఈ కార్బూక్యూమంలో కొంతాల ఉపాధ్యాయులు, విద్యార్థులు, మరియు ఇండ్ర్ ఎవ్యూట్ పార్ట్స్ ఇంట్స్ నాయరు. ఈ కార్బూక్యూమం సంపాదక 06 సుండి సంవత్సర 16, 2024 పరికల్పితిరుజు సాయంత్రం 6:00 సుండి 8:00 మధ్య బరువుల దీప్యాలింగ్ లే దీప్యాలింగ్ లో చాస్పల్ దా. ఎం. క్రీవినాన రిస్ట్రిక్ట్ టెక్నికల్ క్లౌడ్ ప్రార్థనల్ దా. ఎం. బి. క్రీవినాన, ప్రో. ప్రెస్ చాస్పల్ అకాడమిక్ దా. ఎం. రమాకృష్ణ, రిటిస్ట్రెక్ట్ దా. టీ. సురేంద్ర, అలా కోల్డ్ సెట్ల్ దా. జ. వీరాంజనేయులు, ఇతర విభాగాల అధ్యాపకులు పార్ట్స్ నాయరు.

## **Feedback from Students:**

The Online Lecture Series on "Emerging Trends of Research in Electrical Engineering Certification Course was an eye-opening journey into the world of Electrical Engineering. The hands-on sessions and real-world projects made complex concepts easier to grasp and apply. The interactive learning environment sparked curiosity, collaboration, and innovation among participants. Students valued the opportunity to enhance their technical skills and gain industry-relevant knowledge.

## 6. Online Certification Course on AI Tools

**Date:** 23/12/2024 to 28/12/2024

**Duration:** 1 Week

**Resource Person:** Dr. M. Venkatesh and Dr. D. Nagatej

**No. of Participants:** 340

**ALA in association with:** Dept. of CSE

### Introduction:

This course is designed to provide a comprehensive understanding of various AI tools that can be utilized in the preparation of annual reports. It will cover text-based AI, image-based AI, audio AI, and specific tools such as ChatGPT, DALL-E, NotebookLM, Leonardo, Llama, Gemini, Perplexity, Litmaps, and Hugging Face. Participants will explore how these technologies can enhance report generation and analysis while considering ethical implications and future directions in AI.

Through expert lectures, interactive sessions, and real-world case studies, this course aims to cover cutting-edge tools in generative AI, content creation, research assistance, and more. The course is meticulously designed to introduce participants to text, image, and audio-based AI tools, enabling them to understand their applications and leverage them for academic, research, and professional excellence.

Through expert-led sessions and live demonstrations, the course empowers participants with the skills and insights required to effectively utilize AI tools in real-world scenarios.

### Details of the Program:

The main purpose of the program is to make students empower with an understanding of cutting-edge digital construction practices and the application of Artificial Intelligence tools in various domains. Program Schedule of the course as follows:

#### Day-1 (23-12-2024)

Overview of AI Tools, Icebreaker Activity, Overview of Generative AI, What is a Prompt and its application, Introduction to Tools (Text Based AI, Image AI, Audio AI), Exploring ChatGPT

### Day-2 (24-12-2024)

Image Generation Tools, DALLE Tutorial, 3 Scenarios, NotebookLM

### Day-3 (26-12-2024)

Exploring Advanced Use Cases, Real-World Problem Solving with AI, Ethics and Future Directions, Final Reflection

### Day-4 (27-12-2024)

Leonardo AI, Lama AI, Gemini, Perplexity, Litmaps

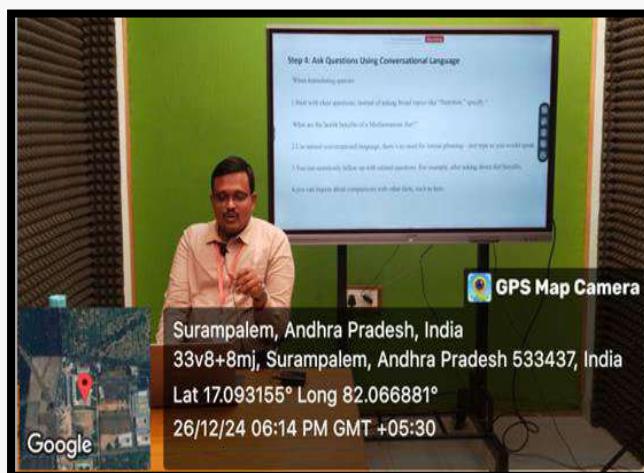
### Day-5 (28-12-2024)

Huggingface

## Outcomes of the Program:

- Understand the potential of AI tools in content creation, education, and research.
- Gain proficiency in using popular tools like ChatGPT, DALLE, Leonardo AI, Huggingface, and more.
- Learn how to generate high-quality images, texts, and audio using generative AI.
- Explore the use of AI tools for research, including literature mapping and automated referencing.
- Develop ethical awareness and best practices for responsible AI usage.
- Earn a certification upon successful completion of the course and evaluation.

## Photo Gallery:



## Media Publication:

### ఆదిత్యలో ఏపి టూర్స్ ఆన్‌లైన్ సర్టిఫికేట్ కోర్సు

**గందేష్వలి:** సూరంపాలెం ఆదిత్య యూనివరిటీలో జరుగుతున్న ఏపి టూర్స్ ఆన్‌లైన్ సర్టిఫికేషన్ కోర్సు ఈ నెల 28వ తేదీ వరకు నిర్వహించనున్నట్లు డిప్యూటీ ప్రో ఛాన్సులర్ ఎం. శ్రీనివాసరద్ది తెలిపారు. జనరేటివ్ ఏపి, టెక్స్ బేస్ ఏపి, ఇమేజ్ ఏపి, ఆడియో ఏపి వంటి అధునిక టూర్స్ పై డి.నాగతేజ్ ఉపన్యాసం ఇచ్చినట్లు తెలిపారు. సాయంత్రం గం. 6 నుంచి గం. 7.30 వరకూ నిర్వహించే ఈ కార్యక్రమంలో వివిధ అధునిక ఏపి టూర్స్పై విస్తృత అవగాహన కల్పిస్తారన్నారు. ఈ కార్యక్రమంలో వైస్ ఛాన్సులర్ ఎంబీ శ్రీనివాస్, ప్రో వైస్ ఛాన్సులర్ ఎస్.రఘుశ్రీ, జి.సురేష్ తదితరులు పాల్గొన్నారు.

**Market Info | A Business Initiative**

**COMPLETION OF 'AI TOOLS' ONLINE CERTIFICATION COURSE**

Aditya University's Aditya Learning Academy (Center for Teaching and Learning), in collaboration with the Department of Computer Science and Engineering, successfully conducted the 'AI Tools' Online Certification Course. This program, which ran from 23rd December to 28th December 2024, concluded with resounding success. The course covered cutting-edge AI tools and technologies, including Generative AI, Text-Based AI, Image AI, Audio AI, DALL-E, Notebook LM, Leonardo AI, and Hugging Face. Participants gained in-depth insights into the application of AI tools for solving real-world problems, their adoption across various domains, and future advancements in AI. The program witnessed enthusiastic participation from students, faculty members, and industry professionals. Eminent resource persons, Dr. D. Naga Tej and Dr. M. Venkatesh, enriched the sessions with their expertise, providing invaluable insights into the field of Artificial Intelligence. Key contributors to the success of this course included Deputy Pro-Chancellor Dr. M. Sreenivasa Reddy, Vice-Chancellor Dr. M. B. Srinivas, Pro Vice-Chancellor (Academics) Dr. S. Rama Sree, Registrar Dr. G. Suresh, and ALA Coordinator Dr. I. Veeranjaneyulu. Their support and guidance were instrumental in the seamless execution of the program. This initiative stands as a testament to Aditya University's unwavering commitment to fostering innovation and providing advanced learning opportunities in the ever-evolving field of Artificial Intelligence.



## ఆదిత్య యూనివర్సిటీలో ముగిసిన ఎఱ టూర్స్ అన్లైన్ సర్టిఫికేషన్ కోర్సు

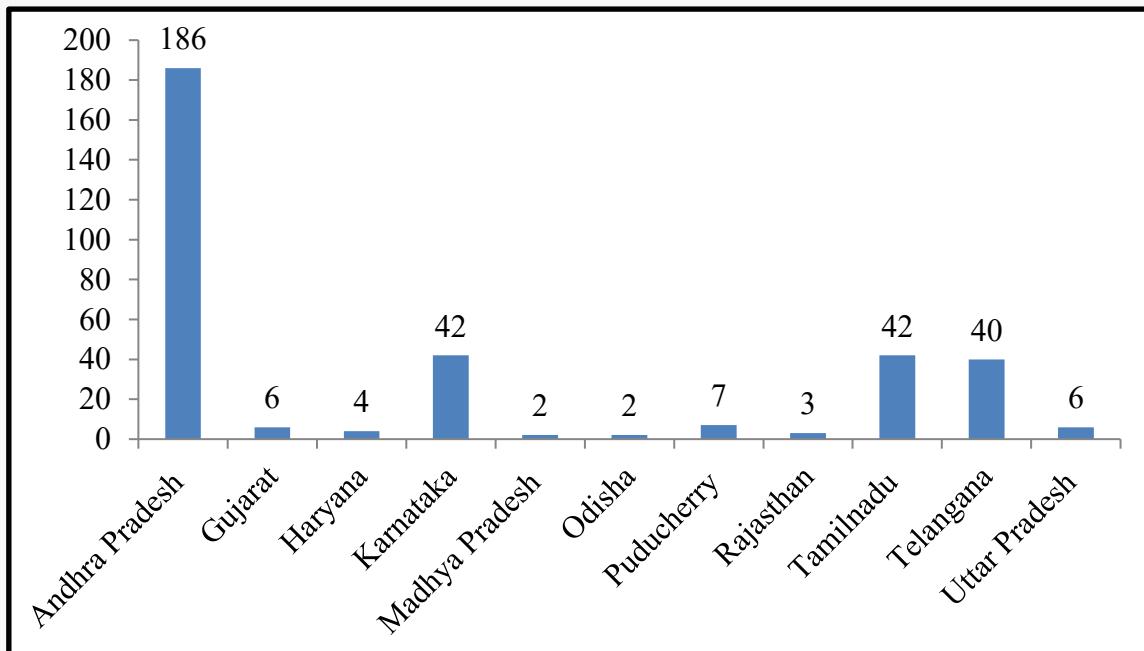
జన ప్రతిభ్యాసి / గండెపల్లి

గండెపల్లి మండలం  
సూరంపాలెం లోని ఆదిత్య  
యూనివర్సిటీ లో ఆదిత్య లెర్నింగ్  
అకాడమీ (సెంటర్ ఫర్ టీచింగ్  
అండ్ లెర్నింగ్) మరియు  
కంప్యూటర్ సైన్స్ అండ్  
బింబింగ్ విభాగం సంయుక్త



ఆధ్వర్యంలో నిర్వహించిన ‘ఎఱ టూర్స్’ అనే ఆశ్వేన్ సర్టిఫికేషన్ కోర్సు విజయవంతంగా ముగిసింది. డిసెంబర్ 23 నుండి డిసెంబర్ 28, 2024 వరకు జరిగిన ఈ కోర్సులో జనరేటివ్ ఎఱ, పక్షీ బేస్ ఎఱ, ఇమేజ్ ఎఱ, ఆడియో ఎఱ,  
డాలీ, నోట్యూక్ ఎల్ ఎమ్, లియోనార్డ్ ఎఱ, హగ్గింగ్ ఫేస్ వంటి ఆధునిక టూర్స్ పై విస్తృత అవగాహన కల్పించారు. అలాగే, ఎఱ టూర్స్ వాడకంపై వ్యాపి, నిజ  
జీవిత సమస్యల పరిష్కారంలో వినియోగం, మరియు భవిష్యత్తు దిశల్లో ఎఱ  
అభివృద్ధి గురించి వివరించారు. ఈ కార్యక్రమానికి విద్యార్థులు, ఉపాధ్యాయులు,  
మరియు పరిశ్రమ నిపుణులు పెద్ద ఎత్తున పాల్గొన్నారు. ముఖ్యంగా, డాక్టర్ డి.  
నాగ తేజ్ మరియు డాక్టర్ ఎం. వెంకటేష్ రిసోర్స్ పర్సన్ గా వ్యవహరించారు.  
కోర్సు విజయవంతంగా కొనసాగడంలో, యూనివర్సిటీ డిప్యూటీ ప్రో ఛాన్సులర్  
డా. ఎం. శ్రీనివాస రెడ్డి, కైస్ ఛాన్సులర్ డా. ఎం. బి. శ్రీనివాస్, ప్రో వైన్  
ఛాన్సులర్ అకడమిక్స్ డా. ఎస్. రఘువ్రాట, రిజిస్ట్రేటర్ డా. జి. సురేష్, కోఅర్డినేటర్  
డా. ఐ.వీరాంజనేయులు ప్రశ్నేక పాత్ర పోషించారు.

### Registered Participants:



## **Feedback from Students:**

The hands-on sessions and real-time demonstrations of AI tools made complex concepts more accessible and easier to apply for all participants. The interactive and engaging learning environment fostered curiosity, creativity, and collaboration throughout the course. Participants appreciated the opportunity to explore cutting-edge technologies like ChatGPT, DALLE, Gemini, and Hugging Face, gaining valuable industry-relevant skills. The course structure, led by expert resource persons, was highly effective in bridging theoretical knowledge with practical implementation. The feedback was overwhelmingly positive, with participants expressing excitement for future advanced sessions and more such impactful learning experiences.

## 7. Online Certification Course on Research Scope in Emerging Areas of Civil Engineering

**Date:** 21/01/2025 to 31/01/2025

**Duration:** 10 Days

**Resource Person:** Dr. B. Rama Mohana Reddy, Dr. S. Govindarajan, Dr. S. Pachaiappan, Dr. S. Anandha Kumar, Dr. P. Lakshmi Narayana, Dr. K. K Yashwanth, Er. G. Suresh Kumar, Dr. R. Anjali, Dr. T. Suman Reddy.

**No. of Participants:** 226

**ALA in association with:** Dept. of Civil Engineering

### Introduction:

The field of Civil Engineering is rapidly evolving, driven by technological advancements, environmental challenges, and the need for sustainable infrastructure. To keep pace with these changes, it is essential for students, researchers, and professionals to explore the emerging trends and research opportunities shaping the future of civil engineering.

This course is designed to provide participants with an in-depth understanding of the latest developments and innovative research areas in the discipline. The course covers a wide range of cutting-edge topics including smart materials, sustainable construction techniques, advanced structural systems, green infrastructure, geospatial technologies, and digital construction practices like Building Information Modeling (BIM) and Artificial Intelligence applications in civil engineering.

Through expert lectures, interactive sessions, and real-world case studies, this course aims to enhance participants' knowledge, spark research interest, and equip them with the skills needed to contribute effectively to the evolving landscape of civil engineering. Whether you're an undergraduate or postgraduate student, an early-career researcher, or a practicing engineer, this course offers valuable insights into the future direction of the profession.

## **Details of the Program:**

The main purpose of the program is to make students Learn about digital construction practices like Building Information Modeling (BIM) and Artificial Intelligence applications in civil engineering. Program Schedule of the course as follows:

### **Day-1(21-01-2025)**

Importance of Sustainable construction materials, Manufacturing of geopolymer concrete, chemistry behind, microstructure and Applications

### **Day-2 (22-01-2025)**

Current Research and Applications of Fiber Reinforced Concrete composite Materials

### **Day-3 (23-01-2025)**

Introduction to Functionally Graded Materials (FGM), Applications, Fabrication Process, Recent emerging research on FGM, Numerical modeling, Limitations and scope

### **Day-4 (24-01-2025)**

Overview of ground improvement techniques,focusing on biopolymers in soil stabilization: Index and engineering properties, applications, challenges, and future research trends.

### **Day-5 (25-01-2025)**

Fluvial hydrodynamics around parallel bridge piers, local scour around piers Boundary layer separation, Streamline Patterns around the Piers, Vortices& circulation Turbulence Future scope of research in these fields and Conclusions.

### **Day-6 (27-01-2025)**

Introduction to AI, Applications in concrete technology, Different AI tools, Methodologies, Assessment tool s, A Practical Example

### **Day-7 (28-01-2025)**

Green materials, Water harvesting and saving renewable power and power saving.

### **Day-8 (29-01-2025)**

An overview of the emerging contaminants and their advanced treatment techniques

### **Day-9 (30-01-2025)**

Effect of Shear Reinforcement and Steel Liner on Impact Resistance of Reinforced Concrete Targets under Subsonic Missiles

### **Day-10 (31-01-2025)**

Size fraction speciation of metal contaminated soils and their remediation

## Outcomes of the Program:

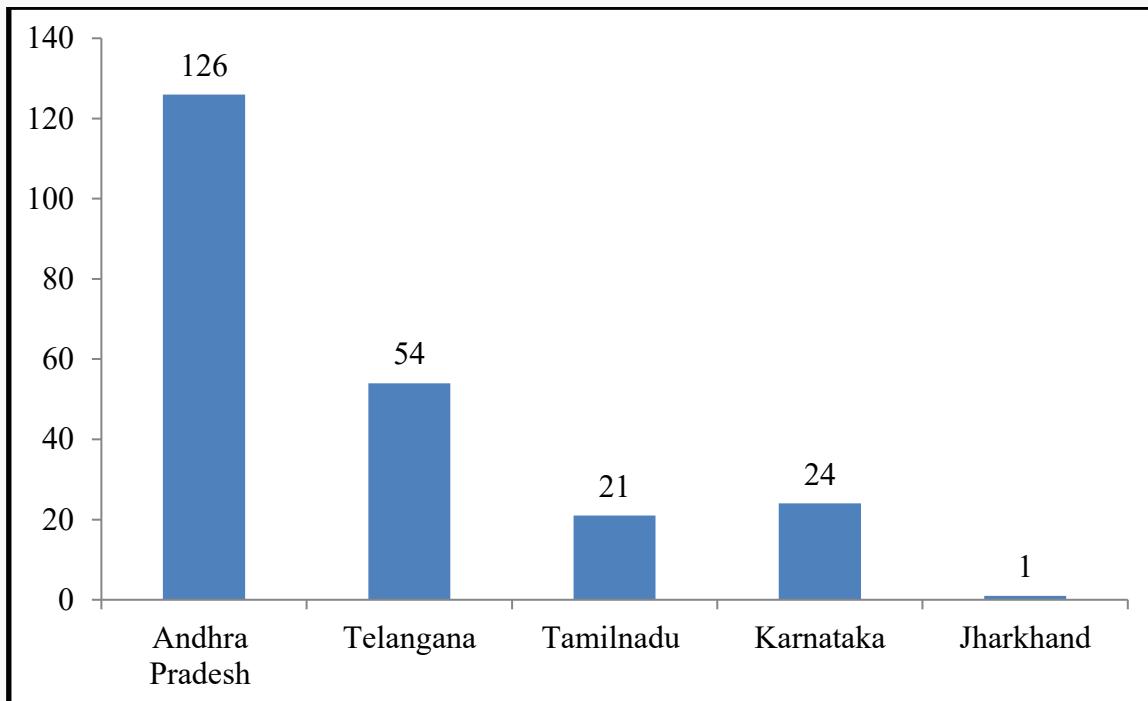
- Understand the importance of sustainable and innovative materials in civil engineering.
- Develop knowledge of AI tools and their integration into construction technologies.
- Learn advanced techniques in water conservation, pollution control, and soil remediation.
- Gain insights into cutting-edge research on structural and environmental engineering applications.

## Photo Gallery:



## **Media Publication:**

## **Registered Participants:**



## **Feedback from Students:**

The 10-day technical program, was highly enriching and well-received by the students, offering a comprehensive exploration of emerging trends and research in civil, environmental, and materials engineering. Each session was thoughtfully structured, beginning with sustainable construction materials and geopolymers concrete, followed by advanced composites like fiber-reinforced concrete and functionally graded materials, which sparked significant interest. The topics on soil stabilization using biopolymers, fluvial hydrodynamics around bridge piers, and the impact of AI in concrete technology provided a perfect balance between theory and innovation. Sessions on green materials, water conservation, and the treatment of emerging contaminants emphasized sustainability and real-world applications. The discussions on the structural behavior of reinforced concrete under missile impact and soil remediation strategies further expanded our knowledge into niche but critical research areas. Students appreciated the expertise of the speakers, the depth of content, and the exposure to advanced tools and methodologies. Suggestions for future programs included more interactive demonstrations, case studies, and hands-on components. Overall, the program was insightful, forward-thinking, and motivational, leaving students inspired and better informed about current and future directions in their fields.

## 8. Online Certification Course on Digital Hardware Engineering with FPGA

**Date:** 19/02/2025 to 25/02/2024

**Duration:** 1 Week

**Resource Person:** Dr. Mohammad Taj

**No. of Participants:** 300

**ALA in association with:** Dept. of ECE

### Introduction:

The Digital Hardware Engineering with FPGA certification course provided a detailed introduction to FPGA-based digital design. It covered the fundamentals of FPGA architecture, Verilog HDL programming, and synthesis techniques for hardware implementation. Participants learned how to design, simulate, and implement digital circuits using FPGA development tools. The course included hands-on sessions on combinational and sequential logic, finite state machines, and hardware interfacing. Emphasis is placed on real-world applications, optimization techniques, and debugging strategies. By the end of the program, participants gained proficiency in FPGA design methodologies and imbibed the capability of developing their own hardware projects. Students, faculty, and industry professionals developed expertise in digital hardware design. Certificates were awarded to participants who meet the attendance, registration fee and assessment criteria.

### Details of the Program:

The main purpose of the program is to make participants gain hands-on experience in FPGA architecture, HDL programming (Verilog/VHDL), and completed FPGA design workflow, including synthesis, simulation, and implementation. Program Schedule of the course as follows:

#### Day-1(19-02-2025)

Introduction to FPGA and Digital Design: Overview of FPGA technology and its applications, Basics of digital logic design, FPGA development workflow and setting up the FPGA development environment.

### **Day-2 (20-02-2025)**

FPGA Architecture and Design Flow , FPGA internal architecture and components, Configurable Logic Blocks (CLBs), LUTs, Flip-Flops, and I/O Blocks and FPGA programming models and methodologies.

### **Day-3 (21-02-2025)**

Introduction to Verilog and Digital Design Basics, Introduction to HDL and Verilog, Difference between Verilog and VHDL, Verilog design flow and simulationBasic syntax and structure of a Verilog module, Data types: wire, reg, integer, parameterHands-on: Writing and simulating a simple AND/OR gates.

### **Day-4 (22-02-2025)**

Combinational Logic Design in VerilogOperators in Verilog: Arithmetic, Logical, Bitwise, Relational, Continuous assignment (assign statement), Procedural blocks: initial and always. Case statements (case, casez, casex), Conditional statements: if-else, ternary (?),Hands-on: Multiplexer (MUX), Decoder, Encoder implementation.

### **Day-5 (24-02-2025)**

Sequential Logic and FSM (Finite State Machines), Difference between combinational and sequential circuitsFlip-Flops: D, JK, T using VerilogSynchronous vs. asynchronous logicCounters and Shift registers, FSM Design: Mealy and Moore Machines, Hands-on: 4-bit counter, traffic light controller FSM

### **Day-6 (25-02-2025)**

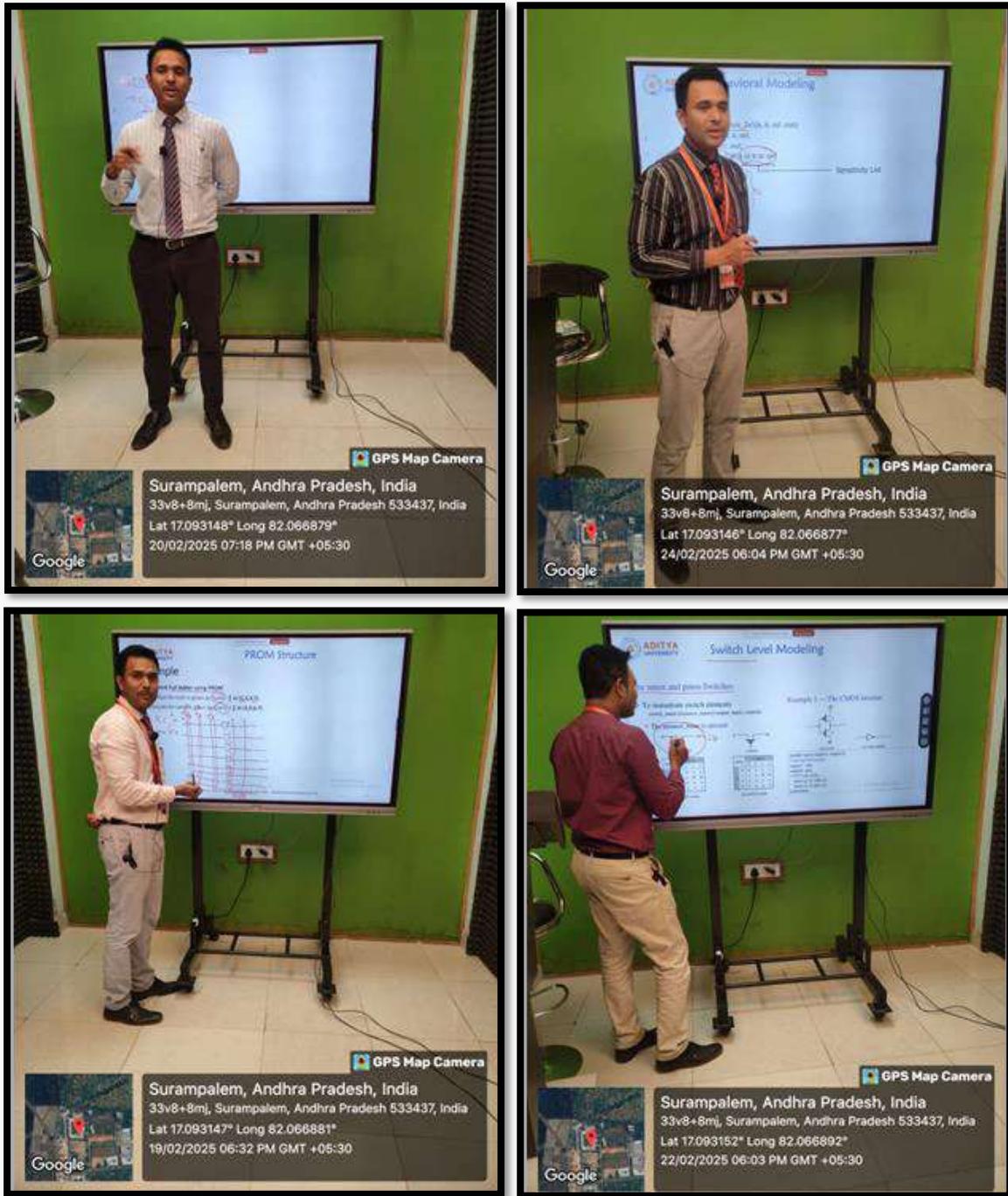
Testbenches and Simulation in Verilog, Writing a Verilog Testbench, monitor, \$display, \$time system tasks, Stimulus generation: initial, always, and delay (#), File handling (\$readmemb, \$writememb), Hands-on: Testbench for ALU or counter.

## **Outcomes of the Program:**

- Participants to gain hands-on experience in FPGA architecture, HDL programming (Verilog/VHDL), and completed FPGA design workflow, including synthesis, simulation, and implementation.
- Learners learn to design, simulate, and deploy digital circuits such as arithmetic units, state machines, and communication interfaces using FPGA platforms, optimizing performance and resource utilization.

- Participants develop the practical skills applicable to real-world domains like embedded systems, signal processing, high-speed computing, and IoT, enhancing their employability in hardware engineering roles.

## Photo Gallery:



## **Media Publication:**



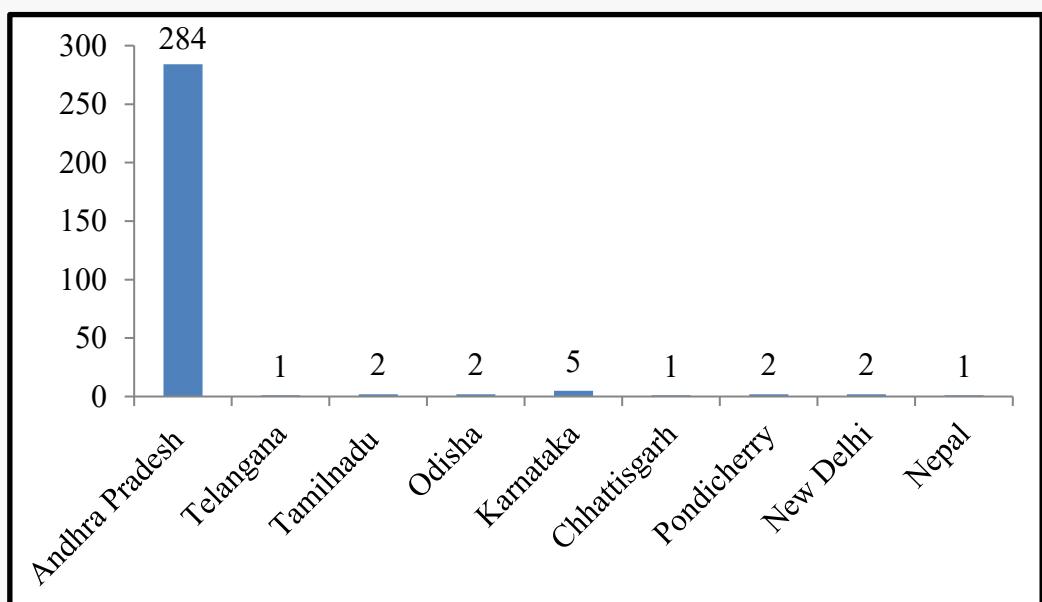
శిక్షణ తరగతిలో మాట్లాడుతున్న శిక్షకులు

## ముగిసిన అన్లైన్ ప్రామాణికత కోర్సు

ಪ್ರಜಾರಕ್ತಿ - ಗಂಡೆವಲ್ಲಿ

సూరంపాలెంలోని ఆదిత్యలో ఆదిత్య కెర్చింగ్ అకాదమ్,  
ఎలక్రూనిక్ అండ్ కమ్యూనికేషన్ ఇంజనీరింగ్ విభాగం సంయుక్తంగా  
నిర్వహించిన 'ఎఫ్‌పిఎచ్‌లో డిజిటల్ హర్డైన్ ఇంజనీరింగ్' అనే అన్నటన్  
ప్రామాణికత కోర్సు విజయపంటంగా ముగిసింది. ఈ కోర్సులో ఎఫ్‌పిఎచ్  
సాంకేతికత పరిచయం, డిజిటల్ డిజైన్ మాలసూక్రాలు, ఎఫ్‌పిఎచ్  
ఆక్యుతిశిల్పాన విధానం, వేరిలాగ్ ప్రోగ్రామింగ్, సంకీష్ట తార్మిక  
రూపకల్పన, క్రమానుగత తార్మికం, అంతిమ స్థితి యంత్రాలు  
(ఎఫ్‌ఎస్‌ఎం), మరియు వేరిలాగ్ లో అనుకరణ మరియు పరీక్ష  
వాతావరణం వంటి ముఖ్యమైన అంశాలపై నిపుణులు వీళ్ళేపించారు.  
ఆదిత్య విశ్వవిద్యాలయం అంతర్లూటియ సంబంధాల సున్ధర్యకర్త  
దాక్షర్ మొహమ్మద్ తాజ్ ముఖ్య పక్కగా వ్యవహారించారు. ఈ  
కార్యక్రమంలో డిప్యూటీ ప్రో ఛాన్సలర్ దాక్షర్ ఎం.ట్రినీవాసరెడ్డి, బైన్  
ఛాన్సలర్ దాక్షర్ ఎంబి.ట్రినీవాస, ప్రో బైన్ ఛాన్సలర్ (అకడమిక్) దాక్షర్  
ఎన్.రమాత్రీ, రజిస్ట్రోర్ దాక్షర్ జి.సురేష్, కోల్డ్రినేటర్ దాక్షర్  
ప.వీరాంజనేయులు పాల్గొన్నారు.

## Registered Participants:



## **Feedback from Students:**

The online certification course on Digital Hardware Engineering with FPGA provided a solid foundation in digital circuit design, focusing on practical applications using FPGA technology. The course content was well-structured, combining theoretical concepts with hands-on lab assignments using tools like VHDL/Verilog and Xilinx Vivado. The instructors were knowledgeable and provided clear explanations, making complex topics accessible. While the course could benefit from more advanced examples and virtual lab enhancements for students without hardware access, it successfully equipped learners with essential skills for FPGA-based development. Overall, it was an engaging and valuable learning experience for anyone interested in hardware engineering.

## **9. Online Certification Course on Harnessing BigData: Business Analytics with Oracle Database**

**Date:** 10/03/2025 to 15/03/2025

**Duration:** 1 Week

**Resource Person:** Dr. V.Vaitheeshwaran

**No. of Participants:** 186

**ALA in association with:** Dept. of CSE, IEduVibhu

### **Introduction**

The one-week online certification course on "Harnessing BigData: Business Analytics with Oracle Database" was designed to provide a comprehensive understanding of big data technologies and their application in modern business analytics. The course aimed to equip participants with the skills to manage, process, and analyze large-scale datasets using Oracle's big data solutions.

Beginning with the fundamental concepts of big data, the course explored its characteristics, associated challenges, and the need for specialized tools. Participants were introduced to Oracle's big data offerings, including Oracle Big Data Service, Big Data SQL, Big Data Connectors, and Oracle NoSQL Database.

A significant portion of the course focused on the Hadoop ecosystem, where learners engaged with HDFS (Hadoop Distributed File System) and MapReduce programming. They also learned about data acquisition, storage, and integration techniques from various sources including relational and NoSQL databases.

### **Details of the Program:**

The main purpose of an Oracle Big Data Analytics workshop is to equip participants with the knowledge and skills to leverage Oracle's big data solutions, including technologies like Hadoop, NoSQL, and SQL, for analyzing and managing large datasets to gain valuable insights and make data-driven decisions.

Program Schedule of the course as follows:

#### **Day-1 (10-03-2025)**

Introduction about BIG DATA, fundamentals of Big Data, Big Data technologies, Data Preprocessing and Cleaning, Data Visualization, Big Data Ethics and Privacy, Big Data Applications in Different Industries.

### **Day-2 (11-03-2025)**

Business Analytics in Big Data, Descriptive Analytics, Diagnostic Analytics, Predictive Analytics, Prescriptive Analytics

### **Day-3 (12-03-2025)**

Fundamentals of Oracle Analytics Cloud, Data Preparation and Transformation, Descriptive Analytics with Oracle BI, Predictive Analytics using Oracle Machine Learning

### **Day-4 (13-03-2025)**

Oracle Database concepts, about relational databases, Schema objects, Data Access, Transaction Management, Oracle Database Architecture

### **Day-5 (14-03-2025)**

Hadoop Ecosystem, Spark, NoSQL Databases, Machine Learning Platforms

### **Day-6 (15-03-2025)**

Q & A Session, Online Examination, Case Studies and Discussions

## **Outcomes of the Program:**

- Understand the characteristics and business implications of Big Data.
- Access and process data using distributed file systems like HDFS.
- Manage and execute jobs in the Hadoop environment.
- Develop comprehensive big data solutions using tools in the Hadoop ecosystem.
- Apply Oracle Big Data SQL and analytics tools for data analysis and visualization.
- Explore the use of machine learning and AI in the context of Oracle's big data architecture.

## **Photo Gallery:**



## Media Publication:

**ఆదిత్యలో 'హర్షస్నింగ్ జిగ్ డేటా ప్రారంభం'**

జన ప్రతిభ్యని / గండేపల్లి

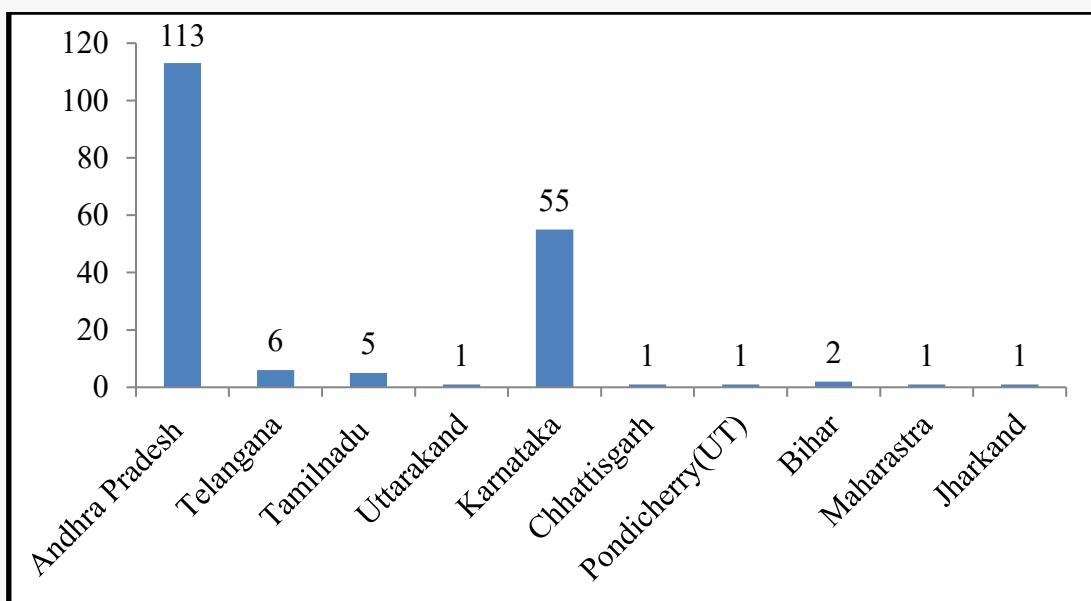
గండేపల్లి మండలం సూరంపాలెం ఆదిత్య యూనివర్సిటీలో ఆదిత్య లెర్నింగ్ అకాడమీ మరియు ఈ ద్వా విభూ ఆధ్వర్యంలో సంయుక్తంగా నిర్మాణస్వ టువంది "హర్షస్నింగ్ బిగ్ డేటా విజనెన్ అనవిట్ట్ విలీ చరాకిల్ డేటాబేస్" అనే అత్యాధునిక అంశం లై 10.03.2025 న ఆస్ట్రేన్ స్ట్రిఫిషన్ ప్రోగ్రాం ప్రారంభమైంది అని డిప్యూటీ ప్రో ఛాస్టలర్ డా. యమ్. క్రీనివాసరెడ్డి తెలిపారు. ప్రస్తుతం వేగంగా అభివృద్ధి చెందుతున్న బిగ్ డేటా మరియు బిటినెన్ అనవిట్ట్ రంగాల్లో చరాకిల్ డేటాబేస్ నినియోగాన్ని, మెలకువలను వివరించడానికి అనేక సూతన అంతాలతో కూడిన పద్ధతిష్ఠమైన ప్రణాళిక రూపొందించబడిందని, ఈ కోర్సుకు ప్రస్తుత డేటా అనవిట్ట్ పరికమలో అసుభవజ్ఞులు రిసోర్స్ పర్సన్స్గా వ్యవహరిస్తారని డా. ఎం.క్రీనివాసరెడ్డి పేర్స్నారు. ఈ కార్యక్రమంలో కొత్తాల ఉపాధ్యాయులు, మిద్యార్థులు, ఇండ్స్ట్రీ నిపుణులు పాల్గొంటున్నారని, ఈ కోర్సు ప్రతి రోజు సాయంత్రం 6:00 సుంచి 7:30 వరకు మార్చి 15, 2025 వరకు కొనసాగుతుందని తెలిపారు. ఈ కార్యక్రమంలో యూనివర్సిటీ వైస్ ఛాస్టలర్ డా. ఎం. బి. క్రీనివాస్, ప్రో వైస్ ఛాస్టలర్ (అకాడమిక్) డా. ఎన్. రఘుశ్రీ, రిష్టస్టర్ డా. జ. సురేష్, ఆదిత్య లెర్నింగ్ అకాడమీ కోర్స్‌లోనేటర్ డా. జ. వీరాంజనేయులు మరియు ఈ ద్వా విభూ మేనేజింగ్ డైరక్టర్ డి.వి. సురేష్, వివిధ విభాగాధిపతులు, అధ్యాపకులు పాల్గొన్నారు.

## ఆదిత్య యూనివర్సిటీలో విజయవంతంగా ముగిసిన బిజినెస్ అనవిట్ట్ విలీ చరాకిల్ డేటాబేస్ సిక్సు

జన ప్రతిభ్యని / గండేపల్లి

గండేపల్లి మండలం సూరంపాలెం ఆదిత్య యూనివర్సిటీలో ఆదిత్య లెర్నింగ్ అకాడమీ మరియు ఈ ద్వా విభూ ఆధ్వర్యంలో సంయుక్తంగా నిర్మాణస్వ టువంది "హర్షస్నింగ్ బిగ్ డేటా విజనెన్ అనవిట్ట్ విలీ చరాకిల్ డేటాబేస్" అనే అత్యాధునిక అంశం లై 10.03.2025 న ఆస్ట్రేన్ స్ట్రిఫిషన్ ప్రోగ్రాం ప్రారంభమైంది బిగ్ డేటా మరియు బిటినెన్ అనవిట్ట్ విలీ చరాకిల్ డేటాబేస్" అనే ఆస్ట్రేన్ స్ట్రిఫిషన్ ప్రోగ్రాం 15.03.2025 న విజయవంతంగా ముగిసింది. ప్రస్తుతం వేగంగా అభివృద్ధి చెందుతున్న బిగ్ డేటా మరియు బిటినెన్ అనవిట్ట్ రంగాల్లో చరాకిల్ డేటాబేస్ నినియోగాన్ని, మెలకువలను వివరించడానికి అనేక సూతన అంతాలతో కూడిన పద్ధతిష్ఠమైన ప్రణాళిక రూపొందించబడింది. ఈ కోర్సుకు ప్రస్తుత డేటా అనవిట్ట్ పరికమలో అసుభవజ్ఞులు రిసోర్స్ పర్సన్స్గా వ్యవహరిస్తారని డా. ఎం.క్రీనివాసరెడ్డి పేర్స్నారు. ఈ కార్యక్రమంలో కొత్తాల ఉపాధ్యాయులు, మిద్యార్థులు, ఇండ్స్ట్రీ నిపుణులు పాల్గొంటున్నారని, ఈ కోర్సు ప్రతి రోజు సాయంత్రం 6:00 సుంచి 7:30 వరకు మార్చి 15, 2025 వరకు కొనసాగుతుందని తెలిపారు. ఈ కార్యక్రమంలో యూనివర్సిటీ వైస్ ఛాస్టలర్ డా. ఎం. బి. క్రీనివాస్, ప్రో వైస్ ఛాస్టలర్ (అకాడమిక్) డా. ఎన్. రఘుశ్రీ, రిష్టస్టర్ డా. జ. సురేష్, ఆదిత్య లెర్నింగ్ అకాడమీ కోర్స్‌లోనేటర్ డా. జ. వీరాంజనేయులు మరియు ఈ ద్వా విభూ మేనేజింగ్ డైరక్టర్ డి.వి. సురేష్, వివిధ విభాగాధిపతులు పాల్గొన్నారు.

## Registered Participants:



## **Feedback from Students:**

The online certification course on "Harnessing BigData: Business Analytics with Oracle Database" offered a well-balanced blend of theory and hands-on practice. Participants gained valuable insights into big data technologies, especially Oracle's ecosystem, including Big Data SQL, Hadoop, and Oracle Analytics Cloud. Interactive sessions, real-time demonstrations, and practical case studies made the learning experience engaging and applicable. Participants appreciated the clarity of concepts, the relevance of tools, and the expertise of the resource persons. The course effectively enhanced their ability to analyze and manage large datasets using modern data platforms.

## 10. Online Certification Course on Design for 3D Printing

**Date:** 17/03/2025 to 22/03/2025

**Duration:** 1 Weeks

**Resource Person:** Dr. SDVVS Bhimeshwar Reddy, Mr.P.Jai Kisan, Mr.V.S. Surya Prakash

**No. of Participants:** 162

**ALA in association with:** Dept. of ME

### Introduction:

The one-week online certification course on "Design for 3D Printing" was designed to provide a structured and in-depth understanding of modern manufacturing with a focus on 3D printing technologies. The course began with an overview of design and manufacturing concepts, highlighting the relationship between the two, as well as introducing various manufacturing types and processes.

Participants were introduced to rapid prototyping techniques, including their fundamentals, applications, and integration with design. The course also covered 3D modeling, using tools like Tinker CAD and other advanced software to develop complex designs.

A major focus was placed on slicing and printing using Fused Deposition Modeling (FDM), where learners explored slicing software (Cura, PrusaSlicer), G-code generation, and optimization. Practical sessions offered hands-on experience in 3D printing.

The latter part of the course addressed common limitations and defects in 3D printing, along with strategies for quality control and defect eradication. The course concluded with discussions on industrial applications, emerging trends, real-world case studies, and a Q&A session followed by an online assessment.

## **Details of the Program:**

The main purpose of the program is to make students Learn about 3D modeling, FDM and applications of 3D Printing. It develops the skills in 3D Printing. Program Schedule of the course as follows:

### **Day-1 (17-03-2025)**

Introduction to Design and Manufacturing, Relation between Design and Manufacturing. Introduction to Manufacturing Types and Processes. Modern Trends in Manufacturing. Role of 3D Printing in Manufacturing

### **Day-2 (18-03-2025)**

Introduction to Rapid Prototyping and 3D Modelling, Fundamentals of Rapid Prototyping, Application, Introduction to 3D Modelling. Introduction to Tinker CAD

### **Day-3 (19-03-2025)**

Advanced 3D Modelling & Prototyping Tools, Working with Tinker CAD for Complex Designs. Exploring Other 3D Modelling Software. Integration of Rapid Prototyping in Design. Practical Examples and Case Studies

### **Day-4 (20-03-2025)**

Slicing and 3D Printing using FDM. Introduction to Slicing Software (Cura, Prusa Slicer, etc.) G-code Generation and Optimization. Fundamentals of Fused Deposition Modeling (FDM). Hands-on 3D Printing Practice.

### **Day-5 (21-03-2025)**

Limitations, Defects & Solutions in 3D Printing, Common Limitations in 3D Printing. Identifying Defects in 3D Prints. Techniques for Defect Eradication, Quality Control and Optimization Strategies

### **Day-6 (22-03-2025)**

Applications, Case Studies, Industry Applications of 3D Printing, Emerging Trends and Future Scope. Case Studies on Real-world Implementations.

Q & A Session & Online Examination

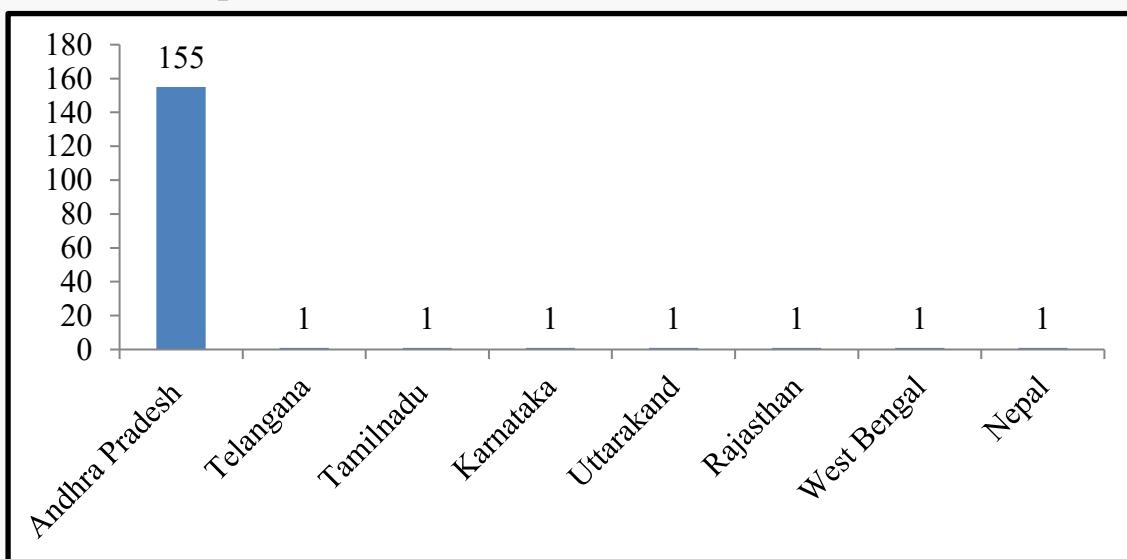
## Outcomes of the Program:

- A comprehensive understanding of design and manufacturing principles and the role of 3D printing.
- In-depth knowledge of rapid prototyping, 3D modelling tools, and software like TinkerCAD and slicing software.
- Hands-on insights into Fused Deposition Modeling (FDM) and G-code generation.
- Awareness of limitations, defects, and quality control strategies in 3D printing.
- Familiarity with real-world applications, case studies, and emerging trends in additive manufacturing.

## Photo Gallery:



## Registered Participants:



## **Media Publication:**

## **Feedback from Students:**

The course received highly positive feedback from participants. Students appreciated:

- The clarity and depth of the topics covered.
  - The interactive sessions and real-time case studies.
  - The expertise and approachability of the resource persons.
  - The practical exposure provided via modelling software and slicing tools.
  - The affordable registration fee with high educational value.

## 11. Revenue through Consultation

Online Certification/Lecture Series courses have helped generate a good amount of revenue. Many students and professionals enrolled in popular courses like Machine Learning and GenAI. This led to increased earnings and helped support the development of more online programs. The income also helped improve the learning platform and provide better resources for students.

S.N o.	Title	Schedule	Associated Dept./Institution	No. of Registered Participants	Amount Generated
1	Machine Learning and Gen AI	05/08/2024 to 16/08/2024	CSE, IEduVibhu	1,560	-
2	Data Visualization with Power BI & Tableau	23/09/2024 to 04/10/2024	AI&ML	520	26,200
3	Emerging Trends of Research in Electrical Engineering	06/11/2024 to 16/11/2024.	EEE	135	8,500
4	AI Tools	23/12/2024 to 28/12/2024	CSE	340	20,200
5	Research Scope in Emerging Areas of Civil Engineering	21/01/2025 to 31/01/2025.	CE	226	12,200
6	Digital hardware Engineering with FPGA	19/02/2025 to 25/02/2025	ECE	300	30,000
7	Harnessing Bigdata: Business Analytics with Oracle Database	10/03/2025 to 15/03/2025	CSE, IEduVibhu	186	18,600
8	Design for 3D Printing	17/03/2025 to 22/03/2025	ME	162	16,200
<b>Total</b>					<b>1,31,900</b>