

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

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L.B. REDDY NAGAR, MYLAVARAM, NTR DIST., A.P.-521 230.

hodcsm@lbrce.ac.in, csmoffice@lbrce.ac.in, Phone: 08659-222 933, Fax: 08659-222931

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (AI&ML)

Report on Exploring Generative AI: Foundations, Models, and Real-World Applications in Vision and Language

Event Type: Faculty Development Program

Event Date & Timings: 25.08.2025 to 30.08.2025 (Online) 10:00AM-12:00 PM Everyday

Resource Persons:

- Dr. D. Chandra Mohan, Assistant Professor, IIIT, Raichur, Andhra Pradesh.
- Dr. Ramalinga Swamy Cheruku, Assistant Professor, National Institute of Technology, Warangal
- Dr. D. Chandra Mohan, Assistant Professor, IIIT, Raichur, Andhra Pradesh.
- Dr. Dheeraj Kodati, Assistant Professor, Mahindra University, Hyd.
- Dr. Damodar Reddy Edla, Associate Professor, National Institute of Technology, Goa

Convener:

- Dr. S. Jayaprada, Professor & HoD

Coordinators:

- Dr. Sk. Jameer, Associate Professor
- Dr. SK. Salma Asiya Begum, Associate Professor
- Mr. JohnWesily Chappidi, Assistant Professor
- Mr. Lalam Narendra, Sr. Assistant Professor
- Mrs. SK Razeena Begum, Sr. Assistant Professor

In Association with: Institution Innovative Council, LBRCE.

Objective: The primary objective of this Faculty Development Program on *"Exploring Generative AI: Foundations, Models, and Real-World Applications in Vision and Language"* is to provide participants with a holistic understanding of Generative AI by covering its theoretical foundations, advanced models, and practical applications. This FDP seeks to:

- Introduce the fundamentals and evolution of generative AI.
- Explore advanced models such as GANs, VAEs, Diffusion Models, and Transformers.
- Provide hands-on exposure to applications in image generation, text synthesis, and multimodal learning.

- Highlight real-world use cases in vision, language, healthcare, and content creation.
- Discuss challenges, ethical concerns, and future research directions.
- Encourage participants to engage in research, innovation, and interdisciplinary collaboration.

About the event: The FDP program was designed to deliver and participate in online mode for the faculty only. Each day the resource person delivers lectures and hands-on online for the faculty. Resource persons from IITs, NITs, Mahindra University, and other institutions of national importance will deliver expert lectures, ensuring rich knowledge-sharing and high-quality learning.

INVITATION

Lakireddy Bali Reddy College of Engineering (Autonomous)
L.B.Reddy Nagar, Mylavaram – 521230
NTR District, Andhra Pradesh.
Department of Computer Science & Engineering (AI&ML)



Cordially invites you to the
Inaugural Function of
Five Day Online Faculty Development Program on
"Exploring Generative AI: Foundations, Models, and Real-World Applications in Vision and Language"
From 25.08.2025 to 30.08.2025
Inaugural starts at 10:00 AM on 25-08-2025

Chief Guest: Dr.K. Appa Rao, Principal

Resource Person
Dr.D.Chandra Mohan, IIT, Sri City

Chief Patrons
Sri L.Jaya Prakash Reddy, Co-Founder & Honorary Chairman
Sri L.R.N.K Prasad Reddy, Chairman

Patrons
Sri G. Srinivasa Reddy, President LBRCT
Dr.K. Appa Rao, Principal
Dr.B. Ramesh Reddy, Vice- Principal

Convener
Dr.S.Jayaprada, Prof.& HOD-CSE(AI&ML)

Coordinators
Dr. Sk. Jameer
Mr. JohnWesily Chappidi
<https://bit.ly/aimlfdp2024>

BROUCHER

ABOUT COLLEGE

Lakireddy Bali Reddy College of Engineering (LBRCE), established in 1998 by philanthropist and NRI entrepreneur Sri Lakireddy Bali Reddy through the Lakireddy Bali Reddy Charitable Trust. Approved by AICTE and affiliated to JNTUK, Kakinada, LBRCE has earned NAAC 'A' grade accreditation, NBA Tier-I accreditation for multiple programs, and ISO certifications. It is recognized as a SIRO by DSIR, a Host Institution and Business Incubator by IIC, and holds 2(f) and 12(B) status by UGC. The college offers 9 B.Tech programs, 4 M.Tech programs, and an MBA, with strong rankings in NIRF (Engineering and Innovation). Situated on a 65-acre green campus, it boasts advanced labs, high-speed internet, solar power infrastructure, sports facilities, hostels, and wellness centers. The institution excels in research with over ₹7 crore in funded projects, 29 patents, 1150+ publications, and several departments recognized as JNTUK research centers.

DEPARTMENT MISSION

- To cultivate interdisciplinary partnerships and drive impactful research that addresses the world's most pressing challenges.
- To developing transparent, accountable, and equitable AI solutions that empower individuals and communities.
- To lead by example and inspire innovation, department champions a culture of continuous learning and experimentation, driving progress and pushing the frontier of possibilities.
- To create actionable insights, drive informed decision-making, and transform industries and societies for the better.

ABOUT DEPARTMENT

The B.Tech. The program in CSE (Artificial Intelligence and Machine Learning) is an undergraduate programme at LBRCE is designed to provide students with advanced learning solutions in cutting-edge technologies such as artificial intelligence, machine learning, and deep learning.

At our department, we are at the forefront of innovation, exploration, and discovery in the dynamic fields of Artificial Intelligence and Machine Learning. With a commitment to excellence, we invite you to embark on a journey of knowledge, creativity, and growth. The main goal of the department is to equip students with the skills, insights, and experiences they need to thrive in an increasingly AI-driven world. Through rigorous academic programs, hands-on projects, and collaborative research opportunities, we cultivate the next generation of leaders, innovators, and problem-solvers.

The Department of CSE (AI & ML) at the LBRCE was established in 2021 with an intake of 60 students and the intake was subsequently increased to 120 students in the year 2023.

DEPARTMENT VISION

To pioneer transformative advancements that redefine the boundaries of intelligence, empower individuals and organizations, and inspire positive change in society.

CHIEF PATRONS

Sri L.Jaya Prakash Reddy,
Co-Founder & Honorary Chairman
LBRCE

Sri L.R.N.K Prasad Reddy,
Chairman, LBRCE

PATRONS

Sri G. Srinivasa Reddy,
President, LBRCT

Dr.K. Appa Rao,
Professor & Principal, LBRCE

Dr.B. Ramesh Reddy,
Professor & Vice-Principal, LBRCE

CONVENER

Dr. S. Jayapada
Professor & HOD,
Department of CSE(AI&ML), LBRCE.

CO - CONVENER

Dr. B. Srinivasa Rao
Professor
Department of CSE(AI&ML), LBRCE.

COORDINATORS

Dr. Sk. Jameer,
Associate Professor

Dr. Sk. Salma Asiya Begum
Associate Professor

Mr. Johnwesily Chappidi
Asst. Professor

Mr. Lalam Narendra
Sr.Asst. Professor

Ms. Sk. Razeena Begum
Sr.Asst. Professor

TOPICS COVERED

25-08-2025

Introduction to Generative AI: Concepts and Applications

Overview of generative models, including GANs, VAEs, and autoregressive models. Real-world applications in art, text, music, and healthcare.

Resource person: **Dr. D.Chandra Mohan,**
Assistant Professor,
IIT Raichur

26-08-2025

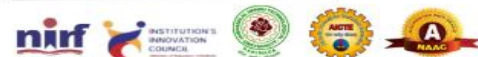
Image Generation Using GANs: Techniques and Tools
Creating realistic images, style transfer, and deepfake technology.

Resource person: **Dr. Ramalinga Swamy Cheruku,**
Assistant Professor Grade-I
NIT Warangal

28-08-2025

Explainable AI (XAI) in Graph Neural Networks
Creating realistic images, style transfer, and deepfake technology.

Resource person: **Dr. D. Chandra Mohan,**
Assistant Professor,
IIT Raichur



TOPICS COVERED

29-08-2025

Transformer Models and Their Role in Generative AI
Deep dive into transformers, attention mechanisms, and models like GPT, BERT, and their generative capabilities.

Resource person: **Dr. Dheeraj Kodati,**
Assistant Professor,
Mahindra university, Hyd.

30-08-2025

Generative AI in Natural Language Processing (NLP)
Text generation, summarization, translation, and conversational AI using generative models.

Future Trends in Generative AI and Research Directions

Emerging models, interdisciplinary applications, and potential research challenges.

Resource person: **Dr. Damodar Reddy Edla,**
Associate Professor, NIT Goa

Registration Fee : Free

(Online mode, 10:00am -12:00pm)

CLICK HERE

<https://forms.gle/uzYJf16hsTkUwz8dA>

ORGANISING COMMITTEE

Dr. B. Rajendra Prasad
Assoc. Professor

Dr I.Murali Krishna
Assoc. Professor

Mr. P. Jagadeeswara Rao
Sr. Assistant Professor

Mr. R. Chiranjeevi
Assistant Professor

Mr. Y. Kranthi Kumar
Sr. Assistant Professor

Mr. M Pruthvi Raj
Sr. Assistant Professor

Mr. V.Sivanagaraju
Sr. Assistant Professor

Mrs. K. Rajasree
Assistant Professor

Mrs.D.Mangamma
Assistant Professor

Mr. K.Ravi Kumar
Assistant Professor

A One-Week Online Faculty Development Programme (FDP)

On

Exploring Generative AI: Foundations, Models, and Real-World Applications in Vision and Language

Dates

25th to 30th August, 2025

(Online mode, 10:00am -12:00pm)



Organising By
Department of

CSE (Artificial Intelligence and Machine Learning)

Lakireddy Bali Reddy College of Engineering (Autonomous)

LB.Reddy Nagar, Mylavaram,
Krishna District, Andhra Pradesh 521230

Contact:

Dr. Sk. Jameer,
Assoc. Professor, 9703233201.

Mr. Ch. Johnwesily,
Asst. Professor, 7306351317.



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L.B. Reddy Nagar, Mylavaram, N.T.R. District, Andhra Pradesh-521230

Welcome to

A ONE-WEEK ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)

On

**Exploring Generative AI: Foundations, Models, and
Real-World Applications in Vision and Language**

Organizing By:

Department of CSE (Artificial Intelligence and Machine Learning)

REGISTRATION SUMMARY

- **Total Registered** : 535
- **Attended the course** : 420+

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (AI&ML)

Day-1 FDP Report

One Week Online Faculty Development Programme (FDP)

Title:

Exploring Generative AI: Foundations, Models, and Real-World Applications in Vision and Language

Organized by:

Department of Computer Science & Engineering (AI & ML), LBRCE

Date: 25th August 2025

Mode: Online (MS Teams)

Timings: 10:00 AM – 12:00 PM

Inaugural Session

The first day of the FDP commenced with an inauguration ceremony. The program began with a prayer song, followed by the lighting of the lamp symbolizing the pursuit of knowledge and wisdom.

Dr. K. Appa Rao, Principal of LBRCE, addressed the gathering and highlighted the importance of Generative AI in academia, research, and industry. He appreciated the Department of CSE (AI & ML) for organizing this FDP and encouraged faculty members to actively engage in emerging technologies.

Dr. S. Jayaprada, Professor & HoD, CSE (AI & ML), in her address, stressed the significance of interdisciplinary research in Artificial Intelligence and expressed her delight in witnessing active participation from faculty across various institutions.

The Day-1 Resource Person, **Dr. D. Chandra Mohan (Assistant Professor, IIIT Raichur)**, shared a few words during the inauguration, briefly introducing the scope of his upcoming session.

The inaugural session set a vibrant tone for the week-long FDP.

Technical Session – 1

Resource Person: Dr. D. Chandra Mohan, Assistant Professor, IIIT, Raichur, Andhra Pradesh.

The first technical session of the FDP was delivered by Dr. D. Chandra Mohan, Assistant Professor, IIIT Raichur, on the topic: "Introduction to Generative AI: Concepts and Applications."

The session provided a comprehensive overview of Generative Adversarial Networks

(GANs), Variational Autoencoders (VAEs), and autoregressive models. Real-world applications in art, text, music, and healthcare were discussed in detail.

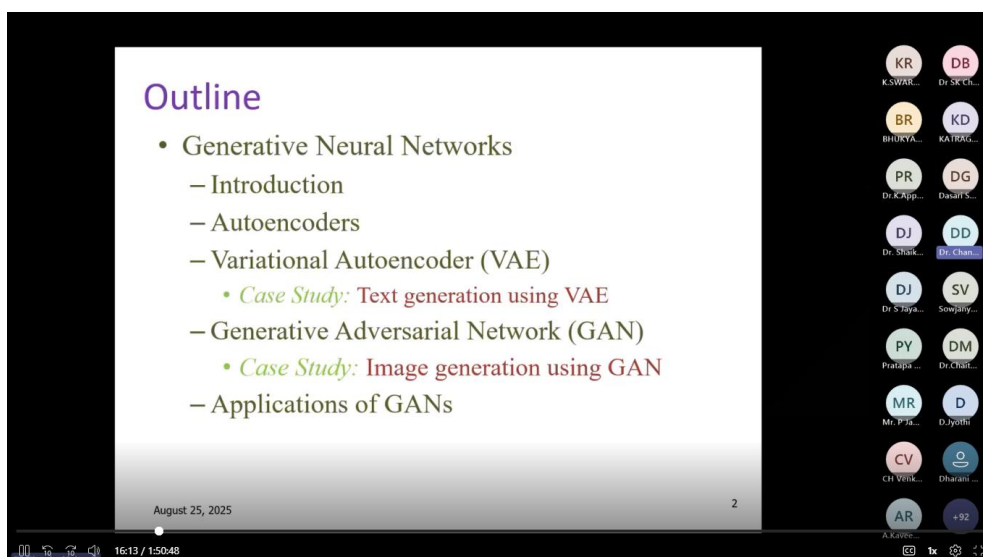
Highlights of the Session

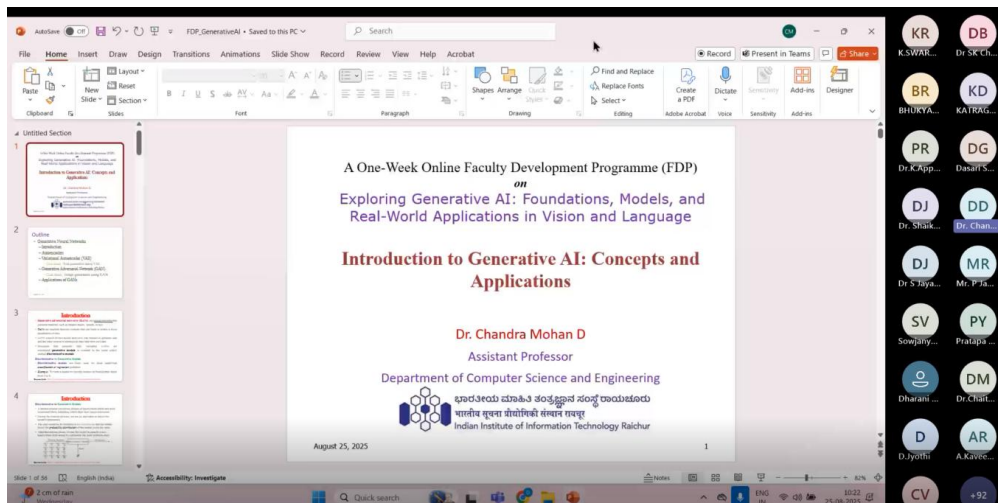
- Conceptual foundations of Generative AI.
- Practical use cases in creative industries and healthcare.
- Challenges and ethical issues in the adoption of Generative AI.
- An interactive Q&A session with participants for clarity on model implementation.
- Conclusion

Topics Discussed :

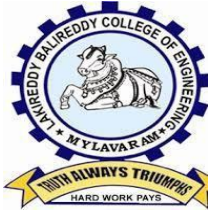
Introduction to Generate AI: Concepts and Applications

- ❖ Overview of generative models.
- ❖ Including GANs.
- ❖ VAEs and autoregressive Models.
- ❖ Real-World Applications in art, text, music and healthcare.





Day-1 concluded successfully with a blend of a graceful inaugural ceremony and an enriching technical session. The participants appreciated the structured beginning and gained valuable insights into the foundations and applications of Generative AI.



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (AI&ML)

DAY-2 :: GALLERY :: FDP:: ONLINE

Resource Person:

Dr. Ramalinga Swamy Cheruku, Assistant Professor, National Institute of Technology, Warangal

Topics Discussed:

- Image Generation Using GANs: Techniques and Tools
- ❖ Creating realistic images
- ❖ Style Transfer
- ❖ Deep Fake technology

ONE WEEK FDP (ONLINE) on "Exploring Generative AI" from 25/08/2025 to 30/08/2025

49:41

Chat Q&A People Raise React View More Camera Mic Share Leave

GAN's Architecture

The diagram illustrates the GAN architecture. It starts with 'Real world images' (yellow cylinder) and a 'Latent random variable Z ' (grey box with three circles). The 'Real world images' are sampled (Sample) to produce x . The 'Latent random variable Z ' is fed into the 'Generator G ' (blue box), which produces $G(z)$. Both x and $G(z)$ are fed into the 'Discriminator D ' (pink box). The Discriminator is labeled as a 'Differentiable module'. It outputs 'Real $D(x)$ ' (green dot) and 'Fake $D(G(z))$ ' (red dot). These outputs are fed into a 'Loss' module (grey box). The Generator is also labeled as a 'Differentiable module'.

- Z is some random noise (Gaussian/Uniform).
- Z can be thought as the latent representation of the image.

Dr. Ramalingaswamy cheruku (Unverified) <https://www.slideshare.net/xavigiro/deep-learning-for-computer-vision-generative-models-and-adversarial-training-upc-2016>

29°C Mostly cloudy

Search

ENG IN 10:03 26-08-2025

ONE WEEK FDP (ONLINE) on "Exploring Generative AI" from 25/08/2025 to 30/08/2025

02:10:50

Pop out Chat Q&A People 168 Raise React View More Camera Mic Share Leave

GANs.pdf - Adobe Reader

File Edit View Window Help

Open 54 / 73 48.9% Tools Fill & Sign Comment

Image-to-Image Translation

- Architecture: *DCGAN*-based architecture
- Training is conditioned on the images from the source domain.
- Conditional GANs provide an effective way to handle many complex domains without worrying about designing *structured loss functions* explicitly.

Positive examples

Real or fake pair?

D

Negative examples

Real or fake pair?

D

G tries to synthesize fake images that fool D
D tries to identify the fakes

Figure 2 in the original paper.

Isola, P., Zhu, J. Y., Zhou, T., & Efros, A. A. "Image-to-image translation with conditional adversarial networks", arXiv preprint arXiv:1611.07004. (2016).

Dr. Ramalingaswamy cheruku (Unverified)

28°C Light rain

Search

ENG IN 11:24 26-08-2025

Paper Sub X Scopus p X Web of S X Journal c X Paper Sub X (263) Wh X ONE X Classwor X 6th_sem_ X

https://colab.research.google.com/drive/10BqGAEMya9Va8J-Ck-eH42WdyjZt2#scrollTo=-9Xf-b0skCaY

6th_sem_project.ipynb Saving failed since 11:31 AM

File Edit View Insert Runtime Tools Help

Commands + Code + Text Run all

```
[7] BUFFER_SIZE = 60000
    BATCH_SIZE = 256

[8] # Batch and shuffle the data
    train_dataset = tf.data.Dataset.from_tensor_slices(train_images).shuffle(BUFFER_SIZE).batch(BATCH_SIZE)
```

The Generator

The generator uses `tf.keras.layers.Conv2DTranspose` (upsampling) layers to produce an image from a random noise.

```
# input 7*7*256 (low resolution version of the output image)
# outputs a single 28*28 grayscale image
# this generator takes a vector of size 100 and first reshape that into (7, 7, 128) vector then applied transpose
# convolution in combination with batch normalization.

def make_generator_model():
    model = tf.keras.Sequential()
    model.add(layers.Dense(100, use_bias=False, input_shape=(100,)))
    model.add(layers.BatchNormalization())
    model.add(layers.LeakyRelu())

    model.add(layers.Reshape((7, 7, 256)))
    assert model.output_shape == (None, 7, 7, 256) # Note: None is the batch size
    model.add(layers.Conv2DTranspose(128, (5, 5), strides=(1, 1), padding='same', use_bias=False))
```

Automatic saving has been pending for 4 minutes. Reloading may fix the problem. Save and reload X

11:34 AM T4 (Python-2)



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (AI&ML)

DAY-3:: GALLERY :: FDP:: ONLINE

Resource Person:

Dr. D. Chandra Mohan, Assistant Professor, IIIT, Raichur, Andhra Pradesh.

Topics Discussed:

Explainable AI(XAI) in Graph Neural Networks

- Generative Neural Networks
 - Introduction
 - Autoencoders
 - Variational Autoencoder (VAE)
 - *Case Study:* Text generation using VAE
 - Generative Adversarial Network (GAN)
 - *Case Study:* Image generation using GAN
 - Applications of GANs

OUTLINE

- Graph Neural Networks (GNNs)
- GNNs for Drug Discovery
- GNN Explanations for Subgraph Extraction
- Conclusion and Future Directions

ONE WEEK FDP (ONLINE) on "Exploring Generative AI" from 25/08/2025 to 30/08/2025

59:01

Take control Pop out Chat Q&A People 125 Raise React View Rooms Apps More Camera Mic Share Leave

DD T ST JV DS DM KP AP A DJ

Generative Neural Networks

Simple GAN: Building the Discriminator

• Face

Dr. Chandra Mohan D (Unverified)

NIFTY -0.64%

Search

ENG IN 10:11 28-08-2025

Participants

Type a name

Share invite

Presenters (4) Mute all

- DJ Dr. Shaik Jameer Organiser
- DB Dr BSR (Unverified)
- DD Dr. Chandra Mo... (Unverified)
- ST Salma Tanveer (Unverified)

Attendees (121)

- A A.ANILKUM... (Unverified)
- AR A.Kaveena R... (Unverified)
- AP Aarthi Prasa... (Unverified)
- AS Anjali Devi Swarna (Unv...)

Introduction: Drug Target Interaction (DTI)

- The process of identifying DTI is an essential step in drug discovery [24].
- DTI refers to the interactions between drugs and biological targets within an organism, like
 - Proteins, enzymes, receptors, or nucleic acids.
- The interaction between a drug and a target is identified through the binding affinity score.

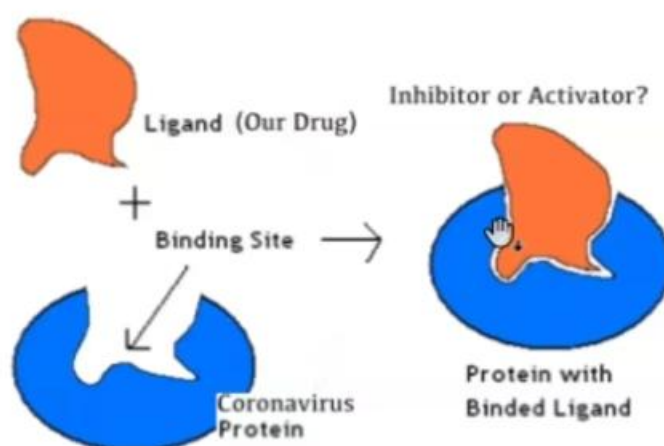


Figure 8: Binding between a Ligand and Corona Virus Protease.



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (AI&ML)

DAY-4:: GALLERY :: FDP:: ONLINE

Resource Person:

- Dr. Damodar Reddy Edla, Associate Professor, National Institute of Technology, Goa

Topics Discussed:

➤ Generative AI in Natural Language Processing (NLP)

Text generation, Summarization, Translation and conversational AI using generative models.

Future Trends in Generative AI and Research Directions

Emerging models, interdisciplinary applications, and potential research challenges.

ONE WEEK FDP (ONLINE) on "Exploring Generative AI" from 25/08/2025 to 30/08/2025

01:18:08

Pop out Chat Q&A People Raise React View Rooms Apps More Camera Mic Share Leave

ST DR CV DP SS KR KR JC SK DJ

Here's What Happens When Your Lawyer Uses ChatGPT

A lawyer representing a man who sued an airline relied on artificial intelligence to help prepare a court filing. It did not go well.

Adobe Photoshop streamlines power and precision for the web; now includes widely popular Adobe Firefly powered features

As an Airforce flight approached Kennedy International Airport in New York, a jet was captured in a head-on collision, prompting the question: Is artificial intelligence a threat? *Wendy Eisenberg/TwoPhoto, via Getty Images*

Yellow Flower Generate

Dr. Reddy (Unverified)

<https://chat.openai.com>

31°C Mostly cloudy

Meeting chat

Some people in this chat are outside your org. It's possible they have message-related policies that will apply to the chat. Learn more

DB AI is broad field and Gen AI Specif area

Narasimha Swamy B (Unverified) 14:22

NB traditional AI analyzes and processes existing information, while Generative AI creates novel content

Dr Jawad Ahmad Dar (Unverified) 14:22

DD Generative ai is specific subset of ai that creates new content

14:22

dear participants pls raise your hand, we will unmute

Type a message

ENG IN 29-08-2025

ONE WEEK FDP (ONLINE) on "Exploring Generative AI" from 25/08/2025 to 30/08/2025

01:32:02

Pop out Chat Q&A People Raise React View Rooms Apps More Camera Mic Share Leave

ST DR CV DP SS KR KR JC PK DJ

Generative AI

GenAI: a type of AI that creates new content based on what it has learned from data

data

model class, architecture, loss function, constraints, optimizers, training scheme... prior knowledge

$p(\mathbf{x}|\theta)$

$p(\mathbf{x}) = \int_{\theta} p(\mathbf{x}|\theta)p(\theta)d\theta$

generate

Dr. Reddy (Unverified)

Meeting chat

Some people in this chat are outside your org. It's possible they have message-related policies that will apply to the chat. Learn more

novel content

Dr Jawad Ahmad Dar (Unverified) 14:22

DD Generative ai is specific subset of ai that creates new content

14:22

dear participants pls raise your hand, we will unmute

Last read

Narasimha Swamy B (Unverified) 14:37

NB traditional AI analyzes and processes existing information, while Generative AI creates novel content

Type a message

ENG IN 29-08-2025



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (AI&ML)

DAY-5:: GALLERY :: FDP:: ONLINE

Resource Person:

- Dr. Dheeraj Kodati, Assistant Professor, Mahindra University, Hyd.

Topics Discussed:

➤ Transformer models and their Role in Generative AI.

Deep dive into transformers, Attention mechanisms, and models like GPT,

BERT their generative capabilities.

11:42

Take control Chat People Raise React View More Camera Mic Share Leave

Transformer Models_1.pdf - Adobe Reader

File Edit View Window Help

But some of the problems that we discussed, still are not solved with RNNs using attention. For example, processing inputs (words) in parallel is not possible. For a large corpus of text, this increases the time spent translating the text.

$f = (\text{L.a., croissance, économique, s'est, ralentie, ces, dernières, années, .})$

Word Samples u_i

Resource State z_i

Attention Mechanism a_i

Attention Vectors h_i

Attention weight (1)

$\sum a_i = 1$

$e = (\text{Economic, growth, has, slowed, down, in, recent, years, .})$

Participants: Dheeraj Kodati, M. Anurad..., AS Anjali Dev..., RP Radhika P..., VJ V.S. JEYAL..., BS Bapatia Se..., SK SRINIVAS..., BR BHUKYA R..., M M. Tejaswi...

1/11

S

Transformers_GENAI_2.pdf - Adobe Reader

Generative AI at Fidelity

Understanding BLOOM: An empirical study on diverse NLP tasks

Compare the Open-Source BLOOM with other models like BERT/GPT

- Does performance of BLOOM scale with parameters?

Authors noticed that performance of BLOOM doesn't scale with parameter size unlike models like BERT

- Does finetuning improve the performance?

Authors added multiple zero-shot cross-lingual and multi-lingual finetuning experiments suggesting BLOOM is at par or worse than monolingual GPT-2 models

- What about toxicity in the generated data?

Toxicity analysis of prompt-based text generation using the RealToxicity Prompts dataset shows that the text generated by BLOOM is at least 17% less toxic than GPT-2 and GPT-3 models.

<https://arxiv.org/pdf/2211.14865.pdf>

Understanding BLOOM: An empirical study on diverse NLP tasks

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Model	toxicity	severe toxicity	obscene
gpt2	0.313	0.022	0.183
gpt3 (Brown et al., 2020)	0.331	0.021	0.178
bloom-1b7	0.26	0.016	0.122

Table 7: Results of toxicity analysis on RealToxicityPrompts dataset.

Video call interface showing participants:

- Dheeraj K...
- M. Anurad...
- M. Tejaswi...
- B. Bhagya...
- CH Venkat...
- Narasimh...
- K. SWARUP...
- Prithviraj s...
- SC
- saikrishna...
- S
- salma

Transformer Models_1.pdf - Adobe Reader

Image caption generation using attention

A woman is throwing a frisbee in a park.

A dog is standing on a hardwood floor.

A stop sign is on a road with a mountain in the background.

A little girl sitting on a bed with a teddy bear.

A group of people sitting on a boat in the water.

A giraffe standing in a forest with trees in the background.

Video call interface showing participants:

- Dheeraj K...
- M. Anurad...
- AS
- RP
- Anjali Dev...
- Radhika P...
- VJ
- BS
- V.S. JEYAL...
- Bapatia Se...
- SK
- BR
- SRINIVAS...
- BHUKYA R...
- M
- M. Tejaswi...
- S
- salma

Transformers_GENAI_2.pdf - Adobe Reader

Generative AI

Generative Pre-Trained Transformer (GPT) - Transformers Architecture

Architecture

- Six Encoder layers stacked
- Six Decoder layers stacked
- Positional Embeddings
- Masked Attention (Encoder-Decoder Attention)

Advantages

- Better long-range connections
- Easier to parallelize
- Can make the networks much deeper (more layers) than RNNs

<https://arxiv.org/pdf/1706.03762.pdf>

<http://palammar.github.io/illustrated-transformer/>

<https://cs182sp21.github.io/static/slides/lec.12.pdf>

Dheeraj Kodati

Participants:

- Dheeraj K...
- M. Anurad...
- M. Tejaswi...
- B. Bhagya...
- CV CH Venkat...
- NB Narasimh...
- KR K. SWARUP...
- PS Prithviraj s...
- SC saisirisha ...
- S salma

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Transformer Models_1.pdf - Adobe Reader

GPT: Released June 2018
GPT-2: Released Nov. 2019 with 1.5B parameters
GPT-3: 175B parameters trained on 45TB texts

GPT-2 SMALL
Model Dimensionality: 768
117M parameters

GPT-2 MEDIUM
Model Dimensionality: 1024
345M

GPT-2 LARGE
Model Dimensionality: 1280
762M

GPT-2 EXTRA LARGE
Model Dimensionality: 1600
1542M

Dheeraj Kodati

Participants:

- Dheeraj K...
- M. Anurad...
- BS Bapatta Se...
- M. Tejaswi...
- BL B. Bhagya...
- CV CH Venkat...
- NB Narasimh...
- VN vijaya ku...
- KR K. SWARUP...
- S salma

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Transformers_GENAI_2.pdf - Adobe Reader

File Edit View Window Help

Generative AI

Generative Pre-Trained Transformer (GPT) – GPT 3 Unreasonable Effectiveness

The three settings we explore for in-context learning

Zero-shot
The model predicts the answer given only a natural language description of the task. No gradient updates are performed.

Translate English to French: task description
cheese => prompt

One-shot
In addition to the task description, the model sees a single example of the task. No gradient updates are performed.

Translate English to French: task description
see otter => source de mer example
cheese => prompt

Few-shot
In addition to the task description, the model sees a few examples of the task. No gradient updates are performed.

Translate English to French: task description
see otter => source de mer examples
peperoni => viande porcine
glush giraffe => girafe pechee
cheese => prompt

Traditional fine-tuning (not used for GPT-3)

The model is trained via repeated gradient updates using a large corpus of example tasks.

see otter => source de mer example #1
gradient update
peperoni => viande porcine example #2
gradient update
glush giraffe => girafe pechee example #N
gradient update
cheese => prompt

Parameters in LM (Billions)	Zero-Shot Accuracy (%)	One-Shot Accuracy (%)	Few-Shot (K=64) Accuracy (%)
0.1B	~5	~5	~5
0.4B	~8	~10	~15
0.8B	~12	~15	~25
1.3B	~18	~22	~35
2.6B	~28	~35	~48
6.7B	~40	~48	~58
13B	~48	~55	~65
175B	~62	~68	~70

TriviaQA is a reading comprehension dataset containing over 650K question-answer-evidence triples.
<https://nlp.cs.washington.edu/triviaqa/>

<https://arxiv.org/pdf/2005.14165.pdf>

For Wifi use Greenline

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- KR
- PS
- K.SWARUP...
- Prithviraj s...
- SC
- saisirsha
- On hold
- 1/8
- S
- salma

FEEDBACK



Welcome to

Valedictory Session



A One-Week Online Faculty Development Programme (FDP) On

Exploring Generative AI: Foundations, Models and Real-World Applications in Vision and Language

>>>> 25th to 30th August, 2025 | From 10 AM to 12 PM <<<<

Organized By:

Department of CSE (Artificial Intelligence and Machine Learning)

Lakireddy Bali Reddy College of Engineering

L.B. Reddy Nagar, Mylavaram, Krishna District, Andhra Pradesh – 521230



తేదీ 31/8/2025



పర్యావరణ రక్షణ అందరి బాధ్యత

మైలవరం, న్యూస్టుడే: మొక్కలు నాటి, వాటిని పరిరక్షించు కుంటూ పర్యావరణాన్ని కాపాడు కోవడానికి ప్రతి ఒక్కరూ కృషి చేయాలని లక్కిరెడ్డి బాలిరెడ్డి ఇంజనీరింగ్ కళాశాల ప్రిన్సిపల్ కె.ఆప్పారావు సూచించారు. స్వర్ణ ఆంధ్రా, స్వచ్ఛ ఆంధ్రాలో భాగంగా శనివారం కళాశాలలో ఎన్ఎస్ఎస్, హైజీన్ కార్యక్రమాన్ని నిర్వహించి మొక్కలు



మొక్క నాటి, నీళ్లు పోస్తున్న ప్రిన్సిపల్ ఆప్పారావు, అధ్యాపకులు

నాటారు. పర్యావరణ పరిరక్షణపై పలు అంశాలను వివరించారు. కార్యక్రమంలో ఉప ప్రిన్సిపల్ రమేష్ రెడ్డి, ఆయా విభాగాల అధికారులు శివహరి ప్రసాద్, ఉమామహేశ్వర రెడ్డి, పవిత్ర, పాపదా నీలోఫర్, విభాగ్యలక్ష్మి, విద్యార్థులు పాల్గొన్నారు.

నాటి 31/8/2025

సంక్షిప్తం

డినంత బెంచీలు లేవని ఎంపీ టీసీ మోరంపూడి స్వరూపరాణి సభకు వివరించారు. వేరే పాఠశాలల్లో మిగిలిపోయిన బెంచీలను తరలించి స్కూల్లో ఏర్పాటు చేయాలని ఎంపీ టీసీ ఎంఈడ - 2 బ్రహ్మచారికి సూచించారు. 22 మంది అధికారులు నమావేశానికి రావాల్సి ఉండగా 12 మంది గైర్హాజరు కావడంతో కలెక్టర్ కి నివేదిక ఇస్తామని ఎంపీ టీసీ తెలిపారు. పీహెచ్ఎస్ వైద్యాధికారి విజయలక్ష్మి, పలు శాఖల అధికారులు, ప్రజాప్రతినిధులు పాల్గొన్నారు. ముగిసిన జనరేటివ్ ఏజెంసీ ఆన్లైన్ ఎఫ్డీపీ మైలవరం: మైలవరం లక్కిరెడ్డి బాలిరెడ్డి ఇంజనీరింగ్ కళాశాలలో ఏవ అండ్ ఎంఎల్ విభాగం ఆధ్వర్యంలో జనరేటివ్ ఏవ ఫౌండేషన్స్, మోడల్స్ అండ్ రియల్ వరల్డ్ అప్లికేషన్స్ ఇన్ విజన్ అండ్ లాంగ్వేజ్ అనే అంశంపై వారం పాటు నిర్వహించిన ఆన్లైన్ ఫ్యాకల్టీ డెవలప్ మెంట్ ప్రోగ్రామ్(ఎఫ్డీపీ) శనివారం ముగిసింది. కార్యక్రమాన్ని చీఫ్ ఫ్యాట్రన్స్ ఎల్.జయప్రకాశ్ రెడ్డి, ఎల్.ఆర్.ఎన్.కే ప్రసాద రెడ్డి, ఫ్యాట్రన్స్ డాక్టర్ కె.ఆప్పారావు(ప్రిన్సిపల్), వైస్ ప్రిన్సిపల్ బి. రమేష్ రెడ్డి జ్యోతి ప్రజ్వలన చేసి ప్రారంభించారు. ఎఫ్డీపీని డాక్టర్ ఎస్.జయప్రద, హెచ్.ఓ.డి, సీఎస్ఈ-ఏవ అండ్ ఎంఎల్, కన్వీన

ర్గా, బి.శ్రీనివాసరావు కో కన్వీనర్ గా వ్యవహరించారు. కార్యక్రమాన్ని డాక్టర్ ఎస్. జమీర్, జాన్ వెస్టి చప్పిడి, ఎన్.కే సల్మా ఆసియా బేగం, ఎన్.కే రజీనా బేగం, ఎల్.నరేంద్ర సమన్వయం చేశారు. ఐఐఐటీ రాయచూర్, ఎన్.ఐటీ వరంగల్, మహేంద్రా యూనివర్సిటీ నుంచి నిపుణులు ప్రసంగించారు. దేశ వ్యాప్తంగా ఉన్న అధ్యాపకులు, పరిశోధకులు ఆన్లైన్లో పాల్గొని జనరేటివ్ ఏవలో అభివృద్ధి చెందుతున్న మోడల్స్, పరిశోధన సవాళ్లు, వాస్తవ జీవిత అన్వయాలపై అవగాహన కల్పించారు.

ఎల్పీఆర్సీఈలో 'స్వర్ణాంధ్ర - స్వచ్ఛాంధ్ర' మైలవరం: మైలవరం లక్కిరెడ్డి బాలిరెడ్డి ఇంజనీరింగ్ కళాశాల ప్రాంగణంలో స్వర్ణాంధ్ర, స్వచ్ఛాంధ్ర కార్యక్రమంలో భాగంగా కళాశాల ఎన్ఎస్ఎస్ యూనిట్, ఎన్సీసీ, ప్రకృతి క్లబ్ సంయుక్త ఆధ్వర్యంలో ఈ నెల థీమ్ మాన్సూన్ హైజీన్ కార్యక్రమాన్ని శనివారం విద్యార్థులు నిర్వహించారు. మాన్సూన్ హైజీన్లో భాగంగా ఎంపీయూపీ స్కూల్లో విద్యార్థులకు పరిశుభ్రత, ఆరోగ్యంపై తీసుకోవాల్సిన జాగ్రత్తలను ఎన్ఎస్ఎస్ వలంటీర్లు విద్యార్థులకు వివరించారు. కళాశాల ప్రిన్సిపల్ డాక్టర్ కె.ఆప్పారావు, వైస్ ప్రిన్సిపల్ డాక్టర్ బి.రమేష్ రెడ్డి మాట్లాడు

తూ, ప్రతి ఒక్కరూ విధిగా మొక్కలను నాటాలన్నారు. ఎన్ఎస్ఎస్ ప్రోగ్రామ్ అధికారి డాక్టర్ బి.శివహరి ప్రసాద్, ఉమామహేశ్వర రెడ్డి ఎన్సీసీ కోఆర్డినేటర్ ఆర్.పవిత్ర, ప్రకృతి క్లబ్ కోఆర్డినేటర్లు డాక్టర్ పహీదా నీలోఫర్, డాక్టర్ వి.భాగ్యలక్ష్మి, విద్యార్థులు పాల్గొన్నారు.

IMPACT ANALYSIS

- Faculty gained a strong understanding of the fundamentals of Generative AI, including GANs, VAEs, Diffusion Models, and Transformers.
- Faculty are now better equipped to integrate generative AI tools into teaching, project guidance, and curriculum enrichment.
- Several participants expressed interest in publishing papers, collaborating with peers, and applying generative AI to real-world problems.
- The program promoted interaction between faculty from diverse domains, opening opportunities for collaborative projects in healthcare, education, and content creation.
- The involvement of eminent resource persons from IIITs, NITs, and Mahindra University added credibility and strengthened the institution's academic network.
- Participants appreciated the structured content delivery, balance of theory and practice, and insights into future AI research directions.
- The program helped many faculty identify new teaching strategies and research ideas relevant to current AI trends.

Co-ordinators: -

- Dr. Sk. Jameer, Associate Professor
- Dr. SK. Salma Asiya Begum, Associate Professor
- Mr. JohnWesily Chappidi, Assistant Professor
- Mr. Lalam Narendra, Sr. Assistant Professor
- Mrs. SK Razeena Begum, Sr. Assistant Professor

HOD