



# A Three Day Faculty Development Program on

## "Recent Trends in Machine Learning"



Organized by  
Department of Computer Science and Engineering  
in Association with  
Indian Society for Technical Education (ISTE)  
Bapatla Engineering College, Bapatla  
Registration Link: <https://forms.gle/LNgoD1b8buPMUGS68>

# About the College

Bapatla Engineering College (Autonomous) was established by Bapatla Education Society in the year 1981 and is reckoned for its academic excellence in engineering & sciences. It is a constituent institution of Acharya Nagarjuna University and is one of the best private engineering institutions in the southern region. BEC offers graduate courses in 9 disciplines with total intake of above 1000 students, 5 post-graduate courses in CSE, CAD/CAM(Mech), PE(EEE), SE(CIVIL) and CESP(ECE). The college is a little away from the din and bustle of Bapatla, a town with a historic and hoary past, about 75 KM. south of Vijayawada on Chennai-Vijayawada rail route. All departments have well equipped laboratories in addition to the common facilities of workshops, central library, state-of-the-art central computing facility, sports facilities and Innovation Centres that houses research and testing facilities for industrial projects and technology labs to promote inter-disciplinary research activities.

# About the Department

The Department of Computer Science and Engineering is established in 1994 and have experienced, well-qualified, committed and motivated faculty with specializations in various streams. The department offers a 4 year B.Tech Program in CSE, CSE with Data Science, CSE with Cyber Security and Masters in CSE. The Department was accredited thrice by NBA of AICTE and NAAC.

# About the Program

- Machine learning is the recent active domain for researchers and faculties. It has a multi disciplinary facet including algorithms, processes, scientific methods in probability and many more. Making use of data fuel in the new generation computing is realized using machine learning. It has a wide range of applications including businesses, marketing, governance, finance, medicine etc.
- This program is designed to catch the changing trends in machine learning by the faculties and upcoming researchers. It helps to uncover the trends in machine learning by academic and industrial delegates.

# Patrons

## *Chief Patrons*

1. Sri. B Venkata Siva Rama Krishna, Acting President & Vice President-II, Bapatla Educational Society.
2. Sri P Papa Rao, Vice President-I, Bapatla Educational Society.
3. Sri M Nageswara Rao, Secretary, Bapatla Education Society.
4. Sri P Bhavanarayana Chowdary, Jt. Secretary & Correspondent, Bapatla Educational Society.
5. Sri Ch Venkaiah, Treasurer, Bapatla Educational Society.

## *Patrons*

1. Dr. K.Vizaya Kumar, Academic Advisor, BES.
2. Dr. V Damodar Naidu, Principal, Bapatla Engineering College.

# Organizing committee

- **Convener**
  - Dr. P. Pardha Saradhi
- **Program Coordinators**
  - Dr. N. Sudhakar
  - Dr. S. Rama Krishna
- **Event Coordinators**
  - Prof. V. Chakradhar
  - Mr. K. Kishan Chand
  - Mr. K. Manideep
  - Mr. A. Ravi Kishore
  - Mr. J. Madhan Kumar
  - Ms. M. Karuna
- **Advisory Committee**
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  - Dr. T. Satyanarayana Murthy
  - Dr. D. Kishore Babu
  - Dr. R. Daniel
  - Mr. M. Rajesh Babu

# Organizing committee

- **Department of CSE Faculty**

- Dr. C R Raman
- Ms. Ch Mangamma
- Mr. T Nagarjuna
- Mr. K Arun Babu
- Mr. V Naveen Kumar
- Mr. R Pavan Karthik
- Mr. SNC Sekhar
- Mr. J Kumar Raja
- Mr. R Veera Mohan
- Mr. P Nanda Kishore
- Mr. G Ramesh Babu
- Mr. B Prasanth Babu
- Mr. K Ashok Babu
- Ms. J Swaroopa
- Mr. A Gopinath
- Mr. M Pavan Kumar

# SCHEDULE

S.No	Date	Time	Resource person	Topic
1	10 <sup>th</sup> Dec 2020	10 A.M-12 P.M	<b>Prof. R. B. V. SUBRAMAANYAM</b> , Professor in CSE & Chief Investigator E&ICT Academy, NIT Warangal	Introduction to machine learning
2	10 <sup>th</sup> Dec 2020	2-P.M.- 4 PM	<b>Dr. D. Jagan Mohan Reddy</b> , Associate Professor, LBRCE, Mylavaram	Understanding Data and feature selection, Hypothesis evaluation
3	11 <sup>th</sup> Dec 2020	10 A.M-12 P.M	<b>Dr Kiran Sree Pokkuluri</b> , Professor, Department of CSE, Sri Vishnu Engineering College for Women	Reinforcement learning and case study
4	11 <sup>th</sup> Dec 2020	2-P.M.- 4 PM	<b>Dr. Atul Negi</b> , Professor, Department of CSE SCIS, University of Hyderabad	Supervised Learning techniques and practical approaches
5	12 <sup>th</sup> Dec 2020	10 A.M-12 P.M	<b>Dr. N.Sudhakar</b> , , Professor, Department of CSE, Bapatla Engineering College, Bapatla	Deep learning and Applications
6	12 <sup>th</sup> Dec 2020	2-P.M.- 4 PM	<b>Dr. V. Ravi</b> , Professor, IDRBT, Hyderabad	Research challenges and new trends in machine learning

# Introduction to machine learning

- Difference between traditional programming with machine learning
- What is machine learning
- Types of learning
- What is a model?
- What is training of the model?
- What is testing of the model?
- What is generalization, over fitting , under fitting etc?
- What are regularization?
- What are the performance factors?
- Practical case studies



**Prof. R. B. V. SUBRAMAANYAM**

Professor in CSE&

Chief Investigator E&ICT Academy

Date:

10 - December

TIME:

9-30 A.M TO 12 P.M

Queries:

15 – 30 minutes

# Understanding Data and feature selection, Hypothesis evaluation

- Data preprocessing
- Data visualization
- Hypothesis evaluation P score, z scores
- Feature selection
- Model evaluation
- Practical case study



Dr. D. Jagan Mohan Reddy  
Associate Professor  
LBRCE  
MYLAVARAM

Date:

10 - December

TIME:

2-00 P.M TO 4 P.M

Queries:

15 – 30 minutes

# Reinforcement learning and case study

- How to Build a Reinforcement Learning system for sequential decision making.
- Understand the space of RL algorithms
- Understand how RL fits under the broader umbrella of machine learning, and how it complements deep learning, supervised and unsupervised learning
- Understand how to formalize your task as a Reinforcement Learning problem, and how to begin implementing a solution.



**Dr Kiran Sree Pokkuluri**

Professor of CSE, Sri Vishnu Engineering College  
for Women,  
Editor in Chief, Parallel and Cloud Computing  
Research,  
Global Vice President of WSA: World Statistical  
Data Analysis Research Association.

Date:

11 - December

TIME:

10-00 A.M TO 12-00 P.M

Queries:

15 – 30 minutes

# Supervised Learning techniques and practical approaches

- Types of supervised learning models
- How to understand research problem and identify suitable model for implementation
- Comparison of various supervised models based on applications
- Essential factors impact the supervised learning
- what are the evaluation techniques for evaluating supervised models



**Dr. Atul Negi**

Professor

Department of CSE

SCIS, University of Hyderabad,  
Central University P.O,  
Hyderabad

Date:

**11 - December**

TIME:

**2-00 P.M TO 3:30 P.M**

Queries:

**15 – 30 minutes**

# Deep learning and Applications

- Artificial neural network
- Introduction to deep learning
- How to choose deep learning problems
- How to select software /tools needed
- how to develop solutions in deep learning problems
- Application development using the deep learning
- Performance enhancement tools free open source and pay as you go models
- Example



**Dr. N.Sudhakar**

**Professor**

Department of cse  
Bapatla engineering  
College(autonomous),  
Bapatla

Date:

12 - December

TIME:

10-00 A.M TO 12:00 P.M

Queries:

15 – 30 minutes

# Research challenges and new trends in machine learning

- Major research areas in machine learning
- What are the trending research problems to observe by the ml researchers
- What are the factors to look at problem selections
- How to continue the research
- Publications and journals to look at
- How to improve research quality
- How to keep the research visible
- Do's and don'ts



**Dr. V. Ravi**

Professor  
IDRBT  
Hyderabad

Date:

12 - December

TIME:

2-00 P.M TO 4 P.M

Queries:

15 – 30 minutes

# Our Laboratories



**WhatsApp groups:**

<https://chat.whatsapp.com/FdJQdvIOTG5EHied2XnAmk>

<https://chat.whatsapp.com/IpoeKWAwnPeBcXnv4vbi3a>

<https://chat.whatsapp.com/JgWnPpMyxa3F8hUJAzkzDi>

<https://chat.whatsapp.com/KrBB5Y5OzYc7gX1uo4jZDw>

**Telegram group**

<https://t.me/joinchat/JwykFhxCG3fOZXBRsXw9Xg>

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