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Dean (Academics), St. Joseph's College of Engineering



DEPARTMENT OF  
ELECTRONICS AND COMMUNICATION ENGINEERING  
PRESENTS

**FDP ON**  
**"DIVERSE APPLICATIONS**  
**OF RESEARCH PARADIGMS**  
**IN AI"**

**ADVISORS**

Dr. B. Victoria Jancee M.E., Ph.D.  
HOD - Staff Affairs

Dr. S. Aghalya M.E., Ph.D.  
HOD - Student Affairs

Dr. P. Ezhilarasi M.E., Ph.D.  
HOD - Lab Affairs

**CO-ORDINATOR**

Dr. R. Avudaiammal M.E., Ph.D.  
Professor

**CO-COORDINATOR**

Dr. J. Martin Leo Manickam M.E., Ph.D.  
Professor

**DECEMBER 05 2022**  
TO  
**DECEMBER 16 2022**

St. Joseph's college of Engineering  
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St. Joseph's Group of Institutions-OMR Chennai



## About the College

St. Joseph's college of Engineering started in the year 1994 with an intake of 160 students in 3 departments is located in a sprawling lush green area of around 120 acres. Under the perseverance and impeccable stewardship of our honourable Chairman Dr. B. Babu Manoharan, this prestigious institution has reached a mile stone of 28 successful years. St. Joseph's has attained the Autonomous status in the year 2020. Currently, 10 Under Graduate courses and 7 Post Graduate courses are offered here. The institute was first recognized as a Research Centre under Anna University in 2007, after which Ph. D programs are also being offered. National Institutional Ranking Framework (NIRF) by MHRD, Govt. of India has ranked our college among the top 100 Institutions in India with a rank of 97 in the year 2017. The college is accredited by NAAC with A+ grade (maximum marks of 3.45) and all its UG courses are accredited by NBA. Our College is recognized as a Scientific and Industrial Research Organization by DSIR and DST Government of India and has ongoing / completed research projects supported by AICTE, ISRO, NRB, DST, DBT, NMRE and TNSCST.

## About the Department

The Department of Electronics and Communication Engineering with state-of-art research facilities and well qualified faculty members produces young aspiring Engineers ever since its inception in 1994. The department is accredited by NBA and the department is offering PG (M.E Applied Electronics) under Anna University, Chennai. The department is recognized by Anna University as Nodal Centre for research since 2010 and thus offers Ph. D program for both part – time and full – time scholars. The department is well equipped with laboratories which include RF & Microwave Lab, Communication system lab, Signal processing lab, Networks lab, Optical communication lab, VLSI and Embedded lab. The department consistently strives for the overall development of the students by supporting them in all their endeavours through career development and placements activities. In order to keep pace with the latest technologies, our faculty enrich their knowledge through continuing education, technical consultancy, research & development. With this stride, the department has produced successful Electronics and Communication Engineers and has made them to excel and flourish with the prominent and leading employers in this field. We have to our credit two MODROBS grants from AICTE and also a funded project from ISRO.

## About the FDP

Artificial intelligence (AI) is the basis for mimicking human intelligence processes through the creation and application of algorithms built into a dynamic computing environment. AI is a broad field that includes Machine Learning(ML) whilst Deep Learning (DL) is a subgroup of ML algorithms. Most researchers in the computer field have done work since the 1950s on ML. Numerous researchers have given lots of inputs to enhance the precision of ML algorithms. DL had been analysed and implemented for various applications and had shown remarkable results, thus this field needs wider exploration which can be helpful for real-world problems. DL helps achieve greater accuracy in challenging areas such as object detection, image classification, etc. Recently, DL has shown great promise in helping make sense of EEG signals and COVID detection due to its capacity to learn good feature representations from raw data. The massive number of sensors deployed in the Internet of Things (IoT) produce gigantic amounts of data for facilitating a wide range of applications. DL would undoubtedly play a role in generating valuable inferences from this massive volume of data and hence will assist in creating smarter IoT. In this regard, exploring the potential of DL for IoT data analytics becomes highly crucial. This course will give an opportunity for the participants to gain insights into the fundamentals of AI and ML concepts and DL architectures. Also, the participants will be exposed to how the ML and DL technologies can be employed for various applications.



**FDP Learning Management Platform : Zoom**

**No Registration Fee.**

**Certificates will be distributed for all successful candidates as per norms of ATAL.**

**Hostel accommodation will be provided on basis of availability only.**



## Targeted Audience

- Faculty members of the AICTE approved institutes
- Research Scholars,
- PG Students,
- Government & Industry employees

## Course Highlights

- A primer on AI that will offer intuition into various aspects of ML and DL along with their rigorous logical reasoning
- Eminent Speakers from IIT's, IIIT's, Industry and other esteemed universities will deliver lectures and hands – on sessions
- Will provide practical exposure in programming with Python tools/libraries for ML and DL
- Will offer diverse application of AI for real-world problems
- Use-cases will be drawn directly from the major research avenues tackled by the researchers like Satallite image , digital signal processing, medical image processing, embedded systems, Deep Generative Modelling.

## Course Outcomes

Upon successful completion of the course, participants will be able to

- Understand the ML DL, and AI concepts and their associated algorithms.
- Get introduced to tools & platforms available to develop ML, DL based applications.
- Get an exposure to the latest research avenues in DL and ML.
- Understand AI application to solve practical real world problems.
- Develop ML, DL based systems & solutions.
- Understand hardware development for certain DL-based applications.



## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi – 110 070

### AICTE Training and Learning (ATAL) Academy

# *Certificate*

This is certified that **Niruban.R**, Associate Professor of **St.Joseph's college of engineering** participated & completed successfully AICTE Training And Learning (ATAL) Academy **Blended/Hybrid** FDP on "**Diverse Applications of Research Paradigms in AI**" from **2022-12-05-2022-12-10** to **2022-12-12-2022-12-16** at **St. Joseph's College of Engineering** .

A handwritten signature in blue ink, appearing to read "Mamta", is written over a horizontal line.

Advisor-I, ATAL Academy  
Mamta Rani Agarwal



A handwritten signature in blue ink, appearing to read "Suresh", is written over a horizontal line.

Coordinator