



ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) ON Mathematical Foundations of Deep Learning : Bridging Theory and Practice (21st July – 30th July 2026)



Organised by
Department of Pure and Applied Mathematics, Alliance University, Bangalore
And

Department of Computer Science and Engineering
E & ICT Academy, NIT Warangal

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

Preamble:

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy's role is to offer Faculty Development Programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

About the FDP:

The Faculty Development Programme (FDP) on Mathematical Foundations of Deep Learning: Bridging Theory and Practice is designed to provide participants with a comprehensive understanding of the mathematical principles that form the backbone of modern deep learning. The programme emphasizes the integration of theoretical concepts such as linear algebra, calculus, probability, statistics, and optimization with practical implementation using Python and deep learning frameworks. Through expert lectures and hands-on sessions, participants will gain insights into neural network architectures, model optimization, representation learning, and emerging AI technologies, enabling them to effectively apply deep learning techniques in teaching, research, and real-world problem-solving.

Major Course Contents:

1. Introduction to Artificial Intelligence, Machine Learning, Data Science
2. Research in Machine Learning and Applications
3. Machine Learning with Feature Representation
4. Feature Selection and Ensemble Methods
5. Linear Algebra for Deep Learning
6. Machine Learning Basics, Linear Regression, Perceptron's, Multilayer Perceptron's, Stochastic Gradient Descent, Backpropagation, Basics of Python, Decision trees, Naive Bayesian Classification, KNN, Unsupervised Learning Methods, K-Means
7. Dimensionality Reduction Methods, PCA, SVM
8. Introduction to Deep Learning and CNN models and RNN
9. Classification and segmentation
10. Research Trends and Real-World Applications of Deep Learning

Faculty conducting this programme:

The programme will be conducted by the faculty members from NIT Warangal; Academicians in the concerned field from IITs/NITs/IIITs are invited to deliver lectures in the programme. Speakers from industries are also expected to deliver as part of the course.

Registration Fee Particulars:

Faculty and Research Scholars	Rs.500/-
Industry Participants	Rs. 2250/-

Participants need to pay the Registration Fee Online using the following details

Online Transfer Details	
Account Name:	Electronics & ICT Academy NITW
Account No:	62423775910
IFSC:	SBIN0020149
Bank and Branch:	State Bank of India, NIT (REC) Warangal

How to apply:

Participants are required to fill in the online registration form by clicking on the following link:

<https://forms.gle/4aUhcqprakZfQFAG9>

Selection Criteria:

Selection will be done based on first-come-first-serve basis to a maximum number of 40 participants. Candidates will be issued satisfactory certificates on successful completion of the course.

Important Dates:

Last date (Application & DD)	15.07.2026
Selection List by E- mail	17.07.2026
Duration	21.07.2026 to 30.07.2026

About NIT Warangal:

National Institute of Technology, Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institute imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering, M.Tech. and Ph.D programmes in various specializations. All B. Tech and M. Tech programmes of NIT Warangal are NBA accredited.

About Alliance University:

Alliance University (AU), Bengaluru, is a premier private university recognized for its excellence in teaching, research, innovation, and industry engagement. Accredited by the University Grants Commission (UGC), NAAC A+, and renowned for its multidisciplinary academic environment, the University offers UG, PG, and Ph.D. programs across Engineering, Sciences, Management, Law, Liberal Arts and other disciplines. With a strong emphasis on research-driven education, global collaborations, and experiential learning, AU is committed to nurturing competent professionals, innovative researchers, and responsible leaders capable of addressing contemporary challenges through knowledge, technology, and sustainable development.



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Mathematical Foundations of Deep Learning
: Bridging Theory and Practice
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**Department of Pure and Applied Mathematics, Alliance University, Bangalore
And**

Department of Computer Science and Engineering

E & ICT Academy, NIT Warangal

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

1. Name :

2. Designation :

3. Institution :

4. Email :

5. Mobile No. :

6.

Reference No:
Amount:
Bank :
Date:

7. Address for Correspondence:

8. Educational Qualification:

9. Subjects taught so far:

10. No. of refresher courses/workshops attended:

11. Experience (in years):

Teaching: Research: Industry:

12. Do you belong to SC/ST : YES /NO

(If yes, please specify and attach a copy of caste certificate to claim the concession)

Declaration

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the coordinator in case, I am unable to attend the course.

Date

Signature of the Applicant

SPONSORSHIP CERTIFICATE

Dr. /Mr. /Ms. is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on **“Mathematical Foundations of Deep Learning: Bridging Theory and Practice”**, sponsored by **Electronics & ICT Academy**, NIT Warangal in collaboration with Department of Pure and Applied Mathematics, Alliance University Bangalore during **21th July – 30th July 2026**.

Signature of Head of Institution
(with seal)

For more enquiries please contact:

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Coordinators

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