National Institute of Technology Raipur

Continuing Education Cell (CEC)

Certificate Course (Online-mode)

on

"Deep Learning: Concepts to Applications with Hands-on Practice"

15th December - 30th December, 2025 (02 Hrs each day from 05:30PM to 07:30PM)

About Course

Objectives of Training Programme: This course offers a comprehensive understanding of deep learning concepts, architectures, and applications. Participants will gain hands-on experience with TensorFlow and PyTorch, focusing on neural networks, CNNs, RNNs, LSTMs, and transfer learning. Real-world case studies in vision, NLP, healthcare, agriculture, and smart systems enhance practical problem-solving skills.

About CEC

Continuing Education Cell (CEC), NIT Raipur aims to update skills, broaden knowledge, enhance qualifications, foster personal growth, and promote National and International technological advancement through training and expertise.

About NIT Raipur

National Institute of Technology Raipur (An Autonomous institute of National Importance) fully funded by the Govt. of India. NIT Raipur is located in Raipur, the Capital City of Chhattisgarh State and spread over an area of approx. 100 acres. NIT Raipur is ranked 70th in engineering category in India by the NIRF, and it is the highest ranked engineering college in Chhattisgarh. Presently NIT Raipur offers 12 undergraduate, 14 Postgraduate (including M.Sc., M.C.A and M.Tech. in Applied Geology) and 18 Ph.D. programs. The institute offers facilities for research and also undertakes R & D activities, provides testing, consultancy and other extension services including continuing education to the industry through the Industry Institute Interaction cell and the placement of the student through the Department of Training & Placement. More details about NIT Raipur are at: **http://www.nitrr.ac.in.**

Features of Course

- A comprehensive overview of the fundamental concepts of Deep Learning including hands-on sessions and live demonstrations.
- Each student group will be assigned a project, which will be supervised and monitored by a mentor.

Eligibility for Participation

- UG/PG graduated/pursuing (final/pre-final year) students
- Ph.D. Scholars from higher education institutions
- Faculties / Staffs / Lab Instructors from technical and academic institutions
- Govt. Employees or Industry/working professionals

For Registration

For More Details Click

https://www.nitrr.ac.in/conference.php

Scan QR for More Details

Course Module

- **Module 1: Foundations of Deep Learning** introduces core concepts, tracing the evolution from traditional AI and ML to modern DL approaches. Students explore biological inspirations, perceptrons, activation and loss functions, gradient descent, and backpropagation through hands-on exercises.
- **Module 2: Deep Neural Network Internals** delves into the structure of neural networks, covering layers, weights, biases, and feedforward mechanisms. It emphasizes regularization methods like dropout and L1/L2, optimization algorithms such as SGD, RMSprop, and Adam, along with preprocessing and evaluation techniques.
- **Module 3: Practical Implementation & CNNs** provides practical exposure to implementing neural networks using NumPy, TensorFlow, and PyTorch, with a focus on CNN architecture, applications, and visualization.
- **Module 4: Advanced Architectures – RNNs, NLP, and Transfer Learning** explores sequence models (RNNs, LSTMs, GRUs), pre-trained models like ResNet, VGG, and BERT, and NLP concepts including embeddings, transformers, and sentiment analysis.
- **Module 5: Emerging Trends and Project Work** introduces generative models (Autoencoders, GANs) and reinforcement learning, culminating in project presentations where students apply deep learning to real-world problems, showcasing innovation and analytical capability.

Important Dates

Registration Last Date (Extended):	~~1st~~ **10th December 2025**
List of shortlisted Candidates:	12th December 2025
Fee Payment Duration:	1st December 2025
Course Start Date:	15th December 2025
Course End Date:	30th December 2025
Course Time :	05:30 PM - 07:30 PM

National Institute of Technology Raipur

Continuing Education Cell (CEC)

Certificate Course (Online-mode)
on

"Deep Learning: Concepts to Applications with Hands-on Practice"

15th December - 30th December, 2025 (02 Hrs each day from 05:30PM to 07:30PM)

Chief Patron

Prof. N.V. Ramana Rao, Director, NITRR

Patron

Prof. G. P. Mishra, Dean (R&C), NITRR

Chairman CEC

Dr. Subhojit Ghosh, Chairman (CEC), NITRR

Convenor

Dr. Sudhakar Pandey, HoD,
Dept. of Information Technology, NITRR

Co-ordinators & Contacts

Dr. Mridu Sahu
Email: mrisahu.it@nitrr.ac.in
Mobile: 9826501139

Dr. Deepika Agrawal
Email:dagrawal.it@nitrr.ac.in
Mobile: 7389233152

Dr. Sweta Jain
Email:swetajain@manit.ac.in
Mobile: 9826293396

Speakers

Subject experts of the course may be from re-nowned institutes and Industries.

Account Details

Account No.	:	**38027633250**
Bank Name	:	**State Bank of India**
Bank Branch	:	**NIT Branch**
IFSC Code	:	**SBIN0002852**
MICR Code	:	492002004
Swift Code	:	SBININBB646
PAN Card Number	:	AAAJN0643G
GSTIN Number	:	22AAAJN0643G1ZN

Fee Details

	Category	Fee (Rupees)
Course Fee	Students (UG/PG/ PhD) of NIT Raipur	(₹ 1200 + 18% GST) = ₹ **1416 /-**
	Outside Students (UG/ PG/PhD) (other than NIT Raipur)	(₹ 1500 + 18% GST) = ₹ **1770 /-**
	Faculty/ Industry Per-sons	(₹ 2500 + 18% GST) = ₹ **2950 /-**

Registration Process

Interested candidates/organizations can apply in the prescribed application form (Annexure-B along with the details of course fee.

The payment can be done either in the form of a Demand Draft (DD) in favour of **"Director, NIT, Raipur"** payable at Raipur or through **online mode** in the given account details. For online payment, the scanned copy of the application form along with the proof of payment should be sent to **cec_assistant@nitrr.ac.in** by the due date (10th December 2025). For payment made through DD, the hard copy of the application along with the DD should be sent to the Chairman, Continuing Education CELL, NIT Raipur, Raipur, Pin: 492010 by the due date (10th December 2025). **After payment, participant is required to fill following google form:**

https://shorturl.at/zhYla

Scan Google Form