Registration Form

Deep Learning and Applications

27-31 May 2019

Name: _____

Designation: _____

Institute/Organization:

_____

Mailing Address: _____

_____

_____

Phone No.(R)_____
          (O)_____
          Mobile: _____

Email: _____

DD No:_____Date:_____

Bank: _____

Accommodation required: Yes / No

Food habit : Veg / Non-Veg

Age: _____ yrs

Category:

Gender: _____

Signature

About the institute

National Institute of Technology Rourkela is an institute of national importance created under the act of parliament. NIT Rourkela provides quality education in a diverse and multi-cultural environment. The mission of the institute is to become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for the society and be a preferred destination for undergraduate and graduate studies. The institute is offering Ph.D. and M.Tech by Research programmes in 21 branches of Engineering. The institute research centers are engaged in consultancy and research activities of several bodies such as DST, DAE, CSIR, DRDO, BARC, ISRO and private industries.

About the Department

The Department of Computer Science and Engineering (CSE) offers B.Tech. course in CSE, M.Tech courses in Computer Science (CS), Information Security (IS), Software Engineering (SE). The department offers PhD programmes in various areas of cutting edge research. At present, more than 50 research scholars are working in various fields. The Department has liaison with reputed industries and R&D organizations. The department conducts short term courses, symposiums, workshops, and conferences throughout the year.

About the Workshop

Deep Learning is changing the way we look at technologies. There is a lot of excitement around Artificial Intelligence (AI) along with its branches namely Machine Learning (ML) and Deep Learning at the moment. With massive amounts of computational power, machines can now recognize objects and translate speech in real time. Artificial intelligence is finally getting smart. It's predicted that many deep learning applications will affect your life in the near future. Actually, they are already making an impact. Within the next five to 10 years, deep learning development tools, libraries, and languages will become standard components of every software development toolkit. This course will be offered through National Knowledge Network (NKN) based Video Conferencing, with lectures delivered by invited experts from IITs, NITs, IIITs and other premier institutes/industries. In addition, local course coordinators will take care of sessions on design orientation/activity linked problems/ assignments/ case studies and quiz test(s).

Workshop

On

Deep Learning and Applications

27-31 May 2019

Department of
Computer Science & Engineering
National Institute of Technology Rourkela
Odisha – 769 008, India

In Association with

E & ICT Academy
Malaviya National Institute of Technology Jaipur
Rajasthan, India

Course Content

Artificial Neural Networks (ANNs)
Introduction to Deep Learning and Motivation. Brief introduction of ANN, Perceptrons, Multilayer perceptron (MLP), Back propagation training for MLP, Stochastic gradient descent. Applications to some practical classification problems. Hands on: Demonstration and implementation of Shallow and Deep architecture, introduction to Python, Tensorflow and Keras.

Regularization, Hyperparameter Tuning and Autoencoders
Deep Feed forward Networks - Regularization - drop out, Minibatch gradient descent, RMSProp and Adam optimization. Autoencoders and Their Types Hands on: Hyper parameter tuning and regularization practice, Minibatch gradient descent, Autoencoders

Convolutional Networks
The Convolution Operation, Pooling, Basic architecture of a Convolution Neural Network, Variants of the Basic Convolution Model, Evolution of Convolution NN Architectures - AlexNet, ResNet and other architectures. Hands on : Convolution neural network application using Tensorflow and Keras, Autoencoders using CNN, Building an application for classification and feature extraction.

Sequence Modeling
Recurrent and Recursive Nets - Unfolding Computational Graphs, Recurrent Neural Networks, The Long Short-Term Memory and Other Gated RNNs. Hands on : Language modeling and machine translation, Chatbots.

Generative Adversarial Networks, Object Detection Algorithms
GAN and their variants- R-CNN , YOLO and SSD Hands on— Object detection, Realistic Image Generation and face recognition.

Experts

Prospective external Experts- (i) Industry support from NVidia, MathWorks (MATLAB) (ii) Dr. Anupama Ray, IBM (iii) Dr. Ritu, Intel, (iv) Prof. R. Venkatesh Babu, IISc Banglore (v) Dr. Biplab Banerjee IITB (vi) Dr. Suresh Viparthi MNITJ

Who is eligible for applying?

Faculty members from academia and students working in the domains.

Registration Details:

There is no registration fee for the workshop but the participants should send a DD of Rs. 1000 which will be return at the end of the course.

How to apply:

The registration has to be paid through a DD which should be drawn in favour of "EICTE Academy, MNIT Jaipur" payable at Jaipur, ICICI MNIT branch (code: ICIC0006768). Filled in application and DD should be send to the contact address provided below. A scanned copy of DD and application can be mailed to prof.ksb@gmail.com for prior intimation. The DD will be returned after the course completes. The scrutiny details will be intimated through mail to the candidates.

Accommodation and Food

- The participants will be provided paid accommodation based on the availability

- No travel allowance will be given.

- Food will be provided during the programme (not chargeable)

Important Dates:

Application Deadline: 23 May 2019
Selection date: 24 May 2019
Event: 27 – 31 May, 2019

How to reach?

Rourkela is on the Howrah (Kolkata)–Mumbai main line of South Eastern railway. The railway station and intrastate bus stand are 6kms and 4kms from NIT Rourkela campus respectively.

The airports near to Rourkela are Ranchi, Bhubaneswar and Kolkata. Rourkela is well connected to these cities by rail and train frequency is very good.

Local Organizing Committee

Prof. A K Turuk
Prof. S K Rath
Prof. D P Mahapatra
Prof. P M Khillar
Prof. B D Sahoo
Prof. P K Sa
Prof. S Chinara
Prof. R K Mohapatra
Prof. Sujatha Mohanthy
Prof. R Nasker
Prof. R Dash
Prof. A Nandy
Prof. S Pyne
Prof. B Arun
Prof. A Kumar
Prof. K Bhaskar
Prof. J Mohapatra
Prof. M N Sahoo
Prof. S Bakshi
Prof. T Mishra

Contacts:

Coordinator: Prof. Korra Sathya Babu (ksathyababu@nitrkl.ac.in, 9439432489)

Chairman: Prof. Bidyut Kumar Patra (patrabk@nitrkl.ac.in)