



Three-Days Workshop

Deep Learning Framework for Applications (DeLeFa-2017)

(Joint Collaboration with Intel Corporation, India and OpenPOWER)

DATE: April 5 - 7, 2017

VENUE: Day -1 (April 05, 2017) at Hotel Leela Palace, Bengaluru
Day -2 & Day-3 (April 06-07, 2017) at C-DAC Knowledge Park, Bengaluru

TENTATIVE TECHNICAL PROGRAMME :

The first day programme is collaborated with The INTEL Corporation, India and will be conducted at the Hotel Leela Palace, Bengaluru. The second programme is collaborated with OpenPOWER Consortium, involving IBM, NVIDIA and MELLEANOX Companies. The second and third day of this programme will be conducted at C-DAC Knowledge Park, Bengaluru.

DeLeFa-2017 objective is to understand implementation and performance issues of Deep Learning (DL) algorithms applied to various scientific application kernels and Information Science Applications on emerging High Performance Computing (HPC) Systems with different Co-processors and GPU Accelerators. An overview of Deep Learning networks which is a new set of Machine Learning (ML) algorithms and their implementation will be discussed. The efforts in applications such as Speech Recognition, Face Recognition, computer vision, and Bio-Informatics will be covered. Methods such as Conventional Neural Networks (CNN), combination of Supervised, unsupervised and semi-supervised learning techniques, and Hidden Markov Model (HMM) will be discussed. We discuss hardware and software features of High Performance Computing (HPC) systems with Deep Learning frameworks and Libraries (**Caffe, Theano, Torch**, etc...). Various data and image set (ImageNet) & Training ImageNet, and data preparation will be explored.

Day-1 Session: INTEL experts cover Artificial intelligence (AI) techniques which will reduce the time to train a deep learning model substantially. INTEL experts discuss scaling of machine learning and deep learning applications quickly using INTEL MKL-DNN library. The Caffe implementation will be discussed which, leverages the Deep Learning capabilities of the INTEL MKL library (MKL DNN) will be used to demonstrate image classification.

Day-2 & Day-3 Session: Experts from OpenPOWER (IBM, NVIDIA, MELLANOX) Foundation will discuss Deep learning algorithms to address the challenges in applications such as speech recognition, natural language processing, and computer vision for accelerating neural network training and extremely fast hardware with GPU accelerators. Experts from NVIDIA will discuss NVIDIA GPU based system for deep learning and AI accelerated

analytics, delivering significant performance improvement over the conventional servers focusing on deep learning frameworks. Experts from C-DAC and other leading academic institutes will cover an overview of Deep Learning algorithms and their implementation for various applications. Experts from Industry and other organizations demonstrate Deep Learning frameworks for applications.

REGISTRATION FEES :

Private Sector	₹9,000
Public Sectors /Govt. Organization	₹8,000
Academic Staff from University /Colleges*	₹6,000
Students*	₹4,000

(*=Limited amount of grant is available which covers concessional registration fee for deserving student participants. The registration fee does not include travel and boarding charges and will have to be borne separately by the participant. The workshop proceedings include softcopy of lectures, lunch and refreshments. Please Visit URL for more information https://www.cdac.in/index.aspx?id=ev_hpc_workshop_DeLeFa_2017

CONTACT ADDRESS :

Dr. VCV. Rao
Associate Director
HPC & DeLeFa-2017 Workshop Co-ordinator
Email: delefa2017@cdac.in OR vcvrao@cdac.in

C-DAC knowledge Park,
#1, Old Madras Road, Near NGEF,
Byappanahalli, Bengaluru- 560038,
Karnataka, India
Phone No: 91-80-66116501
Mobile: +91- 99700 92817
Fax: +91-80-2524 772

Centre for Development of Advanced Computing (C-DAC)

A Scientific Society of the Ministry of Electronics and Information Technology, Govt. of India

C-DAC Knowledge Park, No. 1, Old Madras Road, Byappanahalli, Bengaluru 560 038, India

Tel: +91-8066116400, Fax: + 91-80-2524 7724, www.cdac.in