

Students	– Rs.1500*
Faculty/ Research Scholars	– Rs.2000*
Industry Participants	– Rs.2500*

Certificate will be provided to all registered participants who attend all the sessions.

Payment based accommodation will be provided in the Hostel for the outstation participants on a sharing basis upon special request. No TA/DA shall be provided.

**December 12, 2017**

***The Convenor,  
Department of Information Technology  
K.L.N. College of Information Technology  
Pottapalayam - 630 612.  
TamilNadu, India.  
Mobile No: 9994825063, 8870814448***

**E-mail-id: [deeplearningklncit@gmail.com](mailto:deeplearningklncit@gmail.com)**



**K.L.N. COLLEGE OF INFORMATION TECHNOLOGY** is the first Engineering College on Information Technology in Madurai, started in the year 2001 by the munificent of philanthropists and well-wishers in the Sourashtra Community, which is a linguistic minority in Tamil Nadu. The Institution is approved by A.I.C.T.E., New Delhi and is affiliated to Anna University. The Department of Computer Science Engineering, Electronics and Communication Engineering and Information Technology are accredited by AICTE-NBA. The Institution is an ISO 9001-2015 is certified for its quality educational management. The college offers 5 UG Programs in Engineering and Technology and 4 PG programs. An AICTE Grant of Rs.8.5lakhs was sanctioned under MODROBS scheme for the modernization of Advanced Computing Lab and DST-SERB Grant of Rs28.75lakhs was sanctioned under ECRA. Interaction with Industry and other renowned institutions is carried out for mutual mobilization of technological ideas. The institution has MOU with IBM, Infosys and associated with Professional bodies like ACM, CSI and IET.

Information Technology Department was started in the year 2001 and currently offers B.Tech and M.Tech.(IT) programs. Highly dedicated and well qualified team of faculty members in the Department having considerable academic and research experience are striving their best to provide quality education.

1. Anna University Recognized Research Centre
2. Centre of Excellence in Advanced Data Science Research
3. Conducted National Level Workshop and Seminar Sponsored by ICMR, ISRO, AICTE and DRDO.
4. Implementing DST-SERB Sponsored Major Research project on “Big Data Analytics for Intelligent Traffic Management”

**December 14-15, 2017**



**Organized by**  
**Department of Information Technology**

**Convener**  
**Dr.S.Appavu alias Balamurugan, ME., PhD.**  
**Professor & Head / IT**

**Co-ordinators**  
**Dr.S.Sasikala M.E. PhD**  
**Associate Professor/IT**

**Mrs.P.Prabarani ,M.E (PhD)**  
**Assistant Professor/IT**

**Mrs.P.MohanPriya,M.E**  
**Assistant Professor/IT**



**K.L.N. COLLEGE OF INFORMATION  
TECHNOLOGY, POTTAPALAYAM-630  
612, SIVAGANGAI DIST**

## OBJECTIVE OF THE WORKSHOP

Deep learning is a fast-growing field of Artificial Intelligence concerned with the study and design of computer algorithms for learning good representations of data, at multiple levels of abstraction. The progress has been rapid in the field of Computer Vision especially visual recognition where the main aim is to build Intelligent Systems which can understand the rich visual world around us. And this growth is mainly driven by the explosive growth of diverse applications of Artificial Intelligence in production, the continued growth in data volume, advances in computing power, and the complexity of large-scale learning systems.

The goal of this workshop is to bring together experts working at the crossroads of Artificial Intelligence, Deep Learning and Computer Vision to explore the challenges faced when building practical large-scale intelligent perception systems. In particular, the main aim of the workshop is to elicit new connections among these diverse fields, identify tools, best practices & design principles with end to end projects and hands-on sessions. The workshop will cover Machine Learning and Deep Learning platforms like Keras, Nvidia DIGITS, etc., as well as dive into the reality of applying Deep Learning and Computer Vision algorithms for visual recognition in industry. The workshop also emphasizes on the importance of Transfer Learning and Cloud Computing.

## WHO SHALL PARTICIPATE?

The workshop is aimed at the multi- facet audience from Industry participants, Full time Research Scholars, UG / PG Students and academicians from Engineering & Science colleges in various disciplines like CSE, IT, ECE, M.Tech, MCA and MS. We will confirm your participation by mail based on first come first serve basis

## TAKE AWAY

Complete installation package with required software like Jupyter Notebook, Python, Keras, Sample projects Source Code, Benchmark Datasets, E-Books on Deep Learning, Learning Materials

## RESOURCE PERSON

**Er. Sumanth Reddy Kaliki**

DeepLearning Engineer,  
BlinCam Tokyo, Japan



## TOPICS

### Research and recent covering the aspects like:

Introduction to Artificial Intelligence(AI) and Computer Vision(CV), Challenges in Computer Vision, AI Winters, Birth Of Deep Learning

### Artificial Neural Networks:

Introduction, Back Propagation, Vanishing Gradients, Optimization Techniques, Activation Functions

### Convolution Neural Networks:

Introduction To CNN's and its layers (Convolution Layers, Pooling Layers, Activation Layers, Fully Connected Layers), Dropout, Batch Normalization, Transfer Learning( Fine Tuning, Feature Extraction), Data Augmentation.

### Intro to Benchmark Datasets and Deep Learning

### Frameworks

#### Visual Recognition:

**Classification**( Introduction, CNN architectures like AlexNet, GoogLeNet, ResNet etc, Performance Comparison)

**Localization** (Introduction, Localization as Regression/Sliding Window, Evaluating Localisation)

**Detection**( Introduction, Detection as Regression/Classification, Evaluating Detection, R-CNN, Fast R-CNN, Faster R-CNN, YOLO)

**Segmentation** ( Need For Segmentation, Semantic/Instance Aware Segmentation)

Introduction to Keras, Multi-Layer Neural Networks, Performance Evaluation( Cross Validation, Train/Test Splits), Grid Search for Hyper Parameter Selection, Save the trained network weights using model serialization, Model Check Pointing to select best model, Plotting the Performance Metrics.

### Hands-On Projects:

Hand Written Digits Recognition, Object Recognition In Photographs, Introduction To Amazon Web Services(AWS), Need for Cloud Computing and GPU instances, NVidia DIGITs Platform, Connecting and Transferring Data To The Cloud, Introduction To Caffe Framework, End To End Project( With the help of Custom Dataset On AWS):Implementing AlexNet in Caffe, Fine Tuning, Feature Extraction

## 2 Days Hands-On Workshop on Deep Learning for Computer Vision Applications

14 -15, December 2017

**K.L.N. College of Information Technology  
Pottapalayam, Sivaganagai (Dt)**

## REGISTRATION FORM

Name: .....

Designation: .....

Organization: .....

Address for Correspondence:

.....

.....

PIN Code: .....

Mobile no: .....

E-mail: .....

Payment Details Amount:.....

Date:.....

Accommodation Required: Yes/No

Date:

Signature