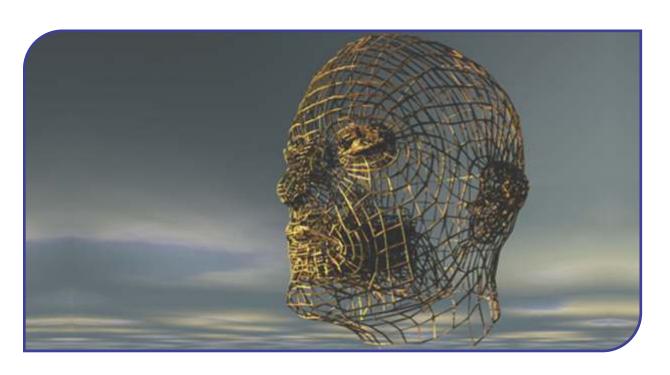Faculty Development Program on

Deep Learning and Artificial Intelligence

December 17-21, 2018
FORE Campus, New Delhi

Program Director:
Prof. Ashok Kumar Harnal

FORE SCHOOL OF MANAGEMENT, NEW DELHI

Completely Project Oriented

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Experiments on all Major Deep Learning Concepts PLUS Reinforcement Learning

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You get all tools and data on two Virtual Machines

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Carry back the VMs. GPL Licensed-Free to Copy & Use

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Yes, We start from Very Basics-No worry on that count

Deep Learning and Artificial Intelligence

Program for Non-Experts

Concepts of Deep Learning and AI are easy to learn and implement-Technology is no longer restricted to the realm of experts. The program assumes no prior Machine Learning background on your part. We initiate you in programming (with python) and then go on to apply deep learning techniques on images, tweets, sensor and sequential (time-series) real world data.

Program Objectives

Deep Learning has been a subject of study since the inception of neural networks. With an advancement in technology, especially, Graphical Processing Units (GPUs), the research in this area has received a fillip. Applications of deep learning range from Computer Vision to Speech recognition & translation to marketing and to drug discovery. It is one of the fastest growing fields of Artificial Intelligence. The objectives of the present program are:

- To work on important technologies of artificial intelligence: Deep learning, Natural Language Processing and Reinforcement Learning
- Practical implementation of the techniques like recurrent neural network and transfer learning on real world applications
- Applications of Deep Learning techniques to problems from a range of disciplines

Pedagogy

We are keenly aware that our participants come from varied backgrounds-both industry wise and education-wise. We also strongly believe that a course in deep learning must simultaneously be practice-based and theory based. The teaching pedagogy is like this: First the theory part is conceptually explained without getting into mathematics and then a project is undertaken to implement the techniques. Data sets for implementation are made available along with a copy of code. Right from day 1, the program is conducted in the computer lab. Our e-learning platform has a wealth of material and articles reflecting latest developments in this field; it is frequently updated. Students are assured of continued access to e-learning site even after the program has finished.

Eligibility

The course is designed for faculty, executives from industry and research scholars who are interested in understanding the concepts and practical applications of deep learning and artificial intelligence. A simple programming background would be preferable.

Topics

The program covers broadly the following topics:

- Introduction to Python; Using jupyter; Data structures in Python and Pandas; Data wrangling; Numpy arrays--**We cover sufficient python to work with deep learning problems**
- Neural Networks and Deep Learning. Experiments using keras
- Introduction to and working with Autoencoders
- Review of the components of Convolution Neural Networks; avoiding over-fitting and under-fitting
- Data Augmentation and image processing for better modelling
- Very Deep Convolutional Neural Network: VGG16 and ResNet

- Transfer Learning
- Recurrent Neural Networks (LSTM)
- Generative-Adversarial Networks (GAN)
- Natural Language Processing: Bag of Words, Word2Vec, Vec2Word
- Reinforcement Learning: Policy Search; OpenAI Gym; Policy Gradients

Under each topic, we execute a project. We use keras as frontend with tensorflow or theano as backends.

Virtual Machines on Deep Learning

Deep Learning and AI employ an array of technologies. To concentrate on learning and to make it hassle free and smooth, we will be giving to each participant two Virtual Machines with all tools and environment to work on deep learning problems and on Reinforcement Learning. The VMs can be carried back by participant and are installable on any laptop. These are released under highly liberal GPL licensing.

Tentative Dates and Duration:

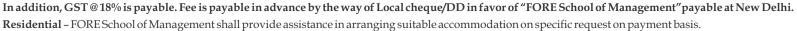|		
Dates	:	**December 17-21, 2018**
Timing	:	**35 hours (5 days * 7 hours)**

Location

FORE School of Management, "Adhitam Kendra", B-18, Qutub Institutional Area, New Delhi 110016

Participation Fee

The participation fee on non-residential basis covering professional fee, program kit and lunch is as follows:

Corporates	:	Rs.20,000/- per participant
Faculty Members	:	Rs.12,500/- per participant
Research Scholars/Students	:	Rs.7,500/- per participant

In addition, GST @ 18% is payable. Fee is payable in advance by the way of Local cheque/DD in favor of "FORE School of Management" payable at New Delhi.

Residential – FORE School of Management shall provide assistance in arranging suitable accommodation on specific request on payment basis.

Registration

The registration form duly filled in along with the program fee should reach us at least 7 days before the commencement date of the program. In case of subsequent withdrawal or cancellation of registration no refund of fee will be allowed. However, substitute(s) may be permitted with prior intimation.

Certificate of Participation

The institute will issue a certificate of participation on conclusion of the program.

Program Coordinator

Prof. Ashok Kumar Harnal: Graduated from IIT Delhi in Electronics and Communication; M. Phil with Distinction from Punjab University, Chandigarh, and MA (Economics) from Punjabi University. Expert in Big Data, Data Analytics and Deep Learning, both on the technology side as also on Analytics side. Extensively taught faculty and students on the subject of big data technology and analytics. Has been associated with University of California, Riverside, US, in one of the Executive Education programs on Big Data and Data Analytics for last three years. Participated in various machine learning projects with real world data in areas of business, environment, marketing and advertisement. Conceived, planned & implemented in Defence Estates three country-wide information systems: a) Raksha Bhoomi to computerize land records; b) Knowledge Management of land-title related files/maps in all Defence Estates offices; and c) Setting up of a Disaster Management organization, Archival Unit and Resource Center, at Delhi and at Pune for safe storage of land-title related records in paper, digital & microfilm forms. Authored two books: one on Programing Games on Computers and the other on Linux Applications and Administration; both books have been published by Tata McGraw-Hill. He can be reached at <ashok@fsm.ac.in>.

ABOUT THE INSTITUTE

FORE School of Management (FORE) has been established by the Foundation for Organisational Research and Education, a non-profit organisation, with a mission "To achieve and sustain Leadership in Management Education, Research, Consultancy and Development".

Programmes and Accreditations:

- The PGDM, PGDM (IB) & PGDM (Finance) courses at FORE are AICTE (All India Council for Technical Education) approved and accredited by National Board of Accreditation (NBA)

- The PGDM courses are equivalent to MBA. Equivalence permission is granted by Association of Indian Universities (AIU)

- FORE has been awarded "SAQS Accreditation" by Association of Management Development Institutions in South Asia (AMDISA)

- FORE has set up a state-of-the-art Studio at its Campus to conduct Online Executive Education Programmes for Working Professionals and has been successfully conducting variety of such online certification courses

Eminent academicians with many years of experience and experts from industry, recognized nationally and internationally, constitute faculty at FORE. FORE has in-house training facilitators in the field of Communication, OB & HR, Finance, Operations, Marketing, IT, International Business and Strategic Decision Making.

With a sharp focus on Management Education, Executive Education Programmes/MDPs, Consulting and Research, FORE stands amongst the Top Business Schools in the country.

FORE conducts Management Development Program/Faculty Development Programs to equip managers/faculty members with knowledge, skills and attitudes required for effectively responding to global developments and competitive requirements. Our MDPs/FDPs are designed with an appropriate blend of conceptual and experiential learning. Apart from open programs, FORE conducts customized In-Company Programs tailored to suit organization's needs on topics/areas specifically required by an organization. These Management Development Programs (MDPs) are either custom-designed to suit client requirements or are offered by faculty on a specific theme to meet various client needs.

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For registration/any other information, please contact:
Executive Education Office
FORE School of Management
Adhitam Kendra
B-18, Qutub Institutional Area, New Delhi 110016.
Phone: (011) 2685 6301 (Direct), 4124 2424-33 (Extn. 471 & 498)
E-mail: exed@fsm.ac.in, Website: www.fsm.ac.in

FORE School of Management

Workshop on

Deep Learning and Artificial Intelligence

December 17-21, 2018, FORE Campus, New Delhi

Registration Form

Name:

Designation:

Institution:

Address:

Phone (O):   Residence:

Mobile:

Email: Fax:

Your expectations from the programme:

Payment Details: (Please tick appropriate and fill)

☐   Payment enclosed (Local cheque/DD No:_____Date:_____
          Amount:_____)

❑   Payment is under process and will reach you before the programme

<div align="right">Signature of Sponsor</div>

**(Please return the completed form by post, or
email: exed@fsm.ac.in:**

**Executive Education Office
FORE School of Management**
B-18, Qutub Institutional Area
New Delhi 110 016

Note: Please feel free to make copies of this form for additional registrations.