

# GLOBAL INITIATIVE FOR ACADEMIC NETWORKS (GIAN)

## MACHINE LEARNING

### Overview

Machine Learning is a method of data analysis that automates analytical model building. Using algorithms that iteratively learn from data, machine learning allows computers to gain insights without being explicitly programmed. Machine Learning involves programming computers to optimize a performance criterion using example data or past experience.

This course will cover popular algorithms in Machine Learning. Participants will learn techniques for analyzing large amounts of data and the tools available for such analysis. The course aims to take a step forward to unravel the opportunities offered by this technology.

This course is organized in two modules that should be taken together. Classes meet every day from 9:00 AM – 5:00 PM, Monday-Friday, for 10 days. Morning sessions will be devoted to lectures and afternoons for hands-on sessions with emphasis on problem solving and programming.

The topics in Module A will expose the participants to the entire gamut of Machine Learning Problem Solving Concepts like supervised, semi-supervised, unsupervised methods, labeled and unlabeled data, the linear model, Gradient Method, Vector Implementation, Classification Vs Regression, Bayesian Learning, Artificial Neural Nets and Deep Learning. In Module B, participants will write code in Python and Tensor Flow to solve problems of practical interest. Some background in Python will be a helpful prerequisite.

Course participants will learn these topics through lectures and hands-on experiments. Also case studies and assignments will be shared to stimulate research motivation of participants.

<b>Modules</b>	<b>A: Machine Learning Concepts (Morning Session) : Oct 30, 2017 - Nov 11, 2017</b> <b>B: hands-on (Afternoon Session) : Oct 30, 2017 - Nov 11, 2017</b> <b>Number of participants for the course will be limited to fifty.</b>
<b>You Should Attend If...</b>	Faculty, Professionals and Research Scholars working in research areas like security, authentication and in promoting multimodal and advanced biometric authentication. Anyone interested in learning how to extract actionable intelligence from large amounts of data, regardless of their field of specialization.
<b>Venue</b>	Central University of Rajasthan, Bandersindri, Kishangarh, Ajmer, Rajasthan, India.
<b>Fees</b>	<b>GIAN Portal registration</b> (Rs 500 fee is mandatory for all participants) Create login and password at <a href="http://www.gian.iitkgp.ac.in/GREGN/index">http://www.gian.iitkgp.ac.in/GREGN/index</a> Login and complete the Registration Form and select Course(s) Confirm application and pay Rs. 500/- (non-refundable) through online payment gateway. Download “pdf file” of the application form and email it to <a href="mailto:Gaurav.meena@curaj.ac.in">Gaurav.meena@curaj.ac.in</a> . <b>Central University of Rajasthan Course Registration Fee</b> (exclusive of GIAN Portal Registration Fee) From Central University of Rajasthan-NIL Rs. 5000.00 per delegate for participants from academic Institutes. Rs. 2000.00 for Research students. Rs. 10000.00 for Industry participants The registration fees for the foreign nationals is USD \$250. The above fee includes all instructional materials, computer use for tutorials and lab, free Internet facility and Lunch and Tea. The participants will be provided with single bedded accommodation on payment basis.

## The Faculty



**Prof. Rao Vemuri** is Emeritus professor in Department of Computer Science at University of California, Davis, CA, USA. He is also a consultant to some Silicon Valley companies. Prof. Vemuri's expertise is in the field of machine learning. He is an author of 6 books and more than 150 refereed journal papers. Dr. Vemuri is the recipient of a Distinguished Public Service Award from the University of California, Davis, in 1997. He is an also recipient of US Faculty Scholar, Vietnam Educational Foundations, 2013 and 2016 and a faculty facilitator, Indo-US collaboration on Engineering Education, 2010-2017.

<http://web.cs.ucdavis.edu/~vemuri/>



**Mr. Gaurav Meena** is working as an Assistant Professor in the Department of Computer Science, Central University of Rajasthan, Ajmer, India. His research interests include Database Management System, Machine Learning and Data Mining.

## Course Co-ordinator

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<http://www.gian.iitkgp.ac.in/GREGN>

## **INSTRUCTION FOR REGISTRATION:**

Please follow the steps below for registering in the GIAN Programme on “**Machine Learning**”:-

1. Register at the GIAN portal on the link <http://www.gian.iitkgp.ac.in/> by clicking on ‘Course Registration/Participant Login’
2. It shall state – ‘Registration to the portal is one time affair and will be valid for lifetime of GIAN. Once registered in the portal, an applicant will be able to apply for any number of GIAN courses as and when necessary. One time Non-refundable fee of Rs. 500/- is to be charged for this service. Please also note that mere registration to the portal will not ensure participation in the courses’.
3. Once done with registration, please select the course ‘**Machine Learning**’ from the list of courses.
4. Send the soft copy of registration details from GIAN website to the following email; Gaurav.meena@curaj.ac.in

## **For payment please consider any of the options;**

1. DD/multicity cheque payable at Bandersindri in the name of Central University of Rajasthan.
2. Bank Transfer at

Central University of Rajasthan Ac/No	666710110003419
Bank	Bank of India
State	Rajasthan
District	Ajmer
Branch	Central University of Rajasthan
IFSC Code	BKID0006667
MICR Code	305013027
Branch Code	6667
Swift Code	BKIDINBBJPR
Address	Central University of Rajasthan, NH-8, Bandersindri, Kishangarh, District-Ajmer, Rajasthan (India), 305817

**Last date for registration is 05Oct 2017. Kindly complete all formalities by then. In case of any queries, please feel free to contact the Course coordinators.**