Faculty Development Programme on

Basic Data Mining Algorithms and their Scalability for Big Data

Course 1

The main purpose of this course is to introduce the basic ideas of data mining algorithms and also of their scalability for Big Data situations. Basic ideas of Map-Reduce algorithms for asynchronous computing in the cloud/Hadoop environments are introduced. How the simple data mining algorithms need to be redesigned for the Map-Reduce environment is presented and analyzed. The objectives of this course are to impart knowledge and understanding of the following topics to the participants:

1. Details of the decision tree induction algorithms and various issues related to their outcomes and performance.
2. Details of association rule mining algorithms and various issues related to their outcomes and performance.
3. Basic sequential and partitional clustering algorithms.
4. Basics of the Map-Reduce paradigm for designing algorithms, and the application of this paradigm to redesign the decision tree and association rule induction algorithms.

Every session will be followed by lab and practice assignments in Matlab and R-programming.
Kindly visit course web page for detailed course contents :
ict.iiitdmj.ac.in/bdatamining.html

Resource Person

Raj K Bhatnagar
Professor of Computer Science
Department of Electrical Engineering
and Computing Systems
University of Cincinnati, Cincinnati, OH 45221, USA
Raj.Bhatnagar@uc.edu

Prof. Raj Bhatnagar is working in the area of data mining and pattern recognition for more than twenty five years. His research projects have been funded by NSF, US Air Force, US DARPA, and a number of Industrial sponsors. His recent research projects include design of mining and analysis algorithms for Big Data situations in Biomedical, Manufacturing, GIS, and Security applications. He has designed and taught graduate level classes on the topics of Data Mining, Big Data Analysis, and Artificial Intelligence.

Faculty Development Programme on

Advanced Data Mining Algorithms and their Scalability for Big Data

Course 2

This course aims to introduce advanced data mining algorithms to participants who have some knowledge about basic data mining algorithms. Advanced classification and clustering algorithms are presented and analyzed. The data type of graphs is introduced and various mining tasks with graph data are presented and analyzed. Scalability of some data mining algorithms and some graph processing algorithms using the Map Reduce paradigm for Hadoop environments is presented and analyzed. The main objectives of this course are to impart knowledge and understanding of the following topics to the participants:

1. Advanced concepts of classification algorithms using the ideas of perceptrons and support vector machines.
2. Hierarchical clustering algorithms and density based clustering algorithms.
3. Map-Reduce based algorithmic formulations for association rule mining, decision tree induction, and graph processing.

Every session will be followed by lab and practice assignments in Matlab and R-programming.
Kindly visit course webpage for detailed course contents :
ict.iiitdmj.ac.in/adatamining.html

Course Coordinators

Dr. Pritee Khanna
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PDPM IIITDM Jabalpur
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datamining@iiitdmj.ac.in

Application Form

☐ Course 1 ☐ Course 2

Name of the Applicant (first, last): .....

.....

Gender: .....

Designation: .....

Name and Address of the Organization/Institute/college:

.....

.....

City/town: ..... Email: .....

Alternate email (if any): .....

Phone Number: .....

Mobile Number: .....

Do you need accommodation? (Yes/No):

Note: Accommodation and meal facilities will be available only from one day before to one day after the course.

DD Number: ..... Date: .....

Issuing Bank: ..... payable at: .....

Signature of the Applicant

I hereby agree to relieve Mr./ Ms./ Dr. .....

..... in case she/he is selected to attend the programme.

Signature and Seal of the Forwarding Authority

Name .....

Designation .....

About Electronics & ICT Academy at PDPM IIITDM Jabalpur

Department of Electronics and Information Technology, Government of India has instituted seven Electronics and ICT Academies with one academy at PDPM IIITDM Jabalpur with the primary objective preparing manpower for two important missions - 'Digital India' and 'Make in India'. The Academy aims at the design and implementation of scalable training programmes in niche areas of electronics and ICT for the development of required knowledge base, skills and tools to unleash the talent of Indian population. The Academy at PDPM IIITDMJ will partner with IIITM Gwalior, MANIT Bhopal, and IIT Indore to run high quality specialized courses for faculty, students and unemployed graduates. In addition, the Academy will conduct customized training programmes and research promotion workshops for corporate sector and educational institutions. The Academy is envisioned to become a central hub of activities on training, consultancy work and entrepreneurship programmes.

About PDPM IIITDM Jabalpur

IIITDM Jabalpur was established in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Since its inception, PDPM IIITDM Jabalpur has been playing a vital role in producing quality human resources for contribution in India's mission of inclusive and sustainable growth. The Institute offers undergraduate, postgraduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Design along with masters and PhD programmes in Mathematics and Physics. Under IIIT act, the Institute has been declared an Institute of National Importance in January 2015. The Institute campus is being developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna airport, Jabalpur.

Faculty Development Programmes on Data Mining Algorithms and their Scalability for Big Data

Who can attend :
The programme is open to faculty and research scholars. Industry personnel working in the concerned/allied discipline may also apply.

How to apply :
Online – The participants may log on to the website ict.iiitdmj.ac.in and fill up the application form by providing all the necessary details.
By Email – Scanned copy of the filled in application form duly endorsed by the forwarding authority may be mailed at datamining@iiitdmj.ac.in, academyiiitdmj@gmail.com.

Please also send/post your duly-filled application form endorsed by the forwarding authority along with the required DD of the registration fee (add accommodation charges, if needed) in favour of 'Electronics and ICT Academy, IIITDMJ' payable at Jabalpur to the contact address. Please ensure that your complete application should reach to us before due dates as mentioned below.

No Travelling Allowance will be paid by the Academy.

Important Dates :
Last Date of Online Registration:
Course 1 : August 10, 2016
Course 2 : December 20, 2016

Spot Registration also available if seats are available.
Course Dates:
Course 1 : August 16 - 21, 2016
Course 2 : January 2 - 7, 2017

Registration Fee for each course (course materiel + lunch inclusive) :
Rs. 2000/- for participants from academia
Rs. 5000/- for participants from industry and research organization

Accommodation charges (if needed) :
Rs. 2000/- (including breakfast and dinner)

Contact us

Electronics and ICT Academy
PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur,
Dumna Airport Road, Jabalpur 482005

datamining@iiitdmj.ac.in
academyiiitdmj@gmail.com
Website: ict.iiitdmj.ac.in

Basic Data Mining Algorithms and their Scalability for Big Data

August 16-21, 2016

Advanced Data Mining Algorithms and their Scalability for Big Data

January 2-7, 2017

Seamless Learning Opportunities

Faculty Development Programme Under Electronics and ICT Academy

PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur,
Dumna Airport Road,
Jabalpur 482005

Building Human Resources For Digital India

E&ICT Academy IIITDMJ

Supported by:
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Ministry of Communication and Information Technology,
Government of India

सत्यमेव जयते