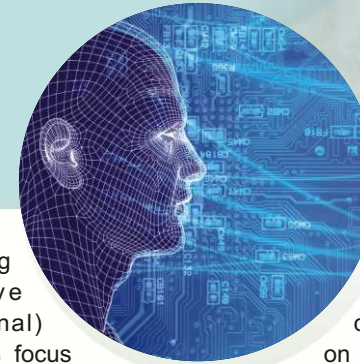




INDIAN INSTITUTE OF INFORMATION TECHNOLOGY AND MANAGEMENT - KERALA

Technopark, Trivandrum

SHORT COURSE IN DATA MINING AND MACHINE LEARNING



Course Helpline:

Clarification if any may be obtained over phone: 0471 2527567 or by sending an email to : datamining@iiitm.ac.in; web : www.iiitm.ac.in

Important Dates:

Last date of receiving filled up application form along with DD : June 20, 2011

Course commences on : June 27, 2011

Data mining predictive companies focus warehouses. Data

is a powerful technology of extraction of hidden information from large (high and ultrahigh dimensional) databases that has a great potential to help on the most important information in their data warehouses. Data mining algorithms predict future trends and behaviours, allowing businesses to make proactive knowledge-driven decisions. The automated, prospective analyses offered by data mining move beyond the analyses of past events provided by retrospective tools typical of decision support systems. Present day data mining algorithms can answer business questions that traditionally were time consuming to resolve. They scour databases to uncover hidden patterns, finding predictive information that experts may miss because it lies outside their expectations.

Developing efficient and robust well motivated general purpose learning algorithms for different machine learning and data mining is a challenging experience, especially as these days there is an overwhelming increase of data. An interdisciplinary approach to pattern matching algorithms with statistical techniques is required to develop accurate machine learning tools.

Course Objective

- + To deliver fundamental concepts in data mining and machine learning.
- + Provide an overview of various problems in data mining and machine learning.
- + To provide contents that is of immediate relevance to the industry and academia.
- + Provide hands on experience for research students and teachers.

Eligibility and Prerequisites

Engineering/Masters degree in Computer Science, Electronics or related. Basic knowledge in principles of programming and mathematics at degree level is a prerequisite.



Course Structure

Course Duration : 1 week
No. of hours : 7 (4+3) per day

Major Topics

- Day 1:** Introduction to data mining and data mining tools.
- Day 2:** Preprocessing data and presentational structure: e.g Trees, clusters, sampling, Cleansing
- Day 3:** Simple learning algorithms and evaluating the learning process: e.g. divide and conquer, rules, linear models, neural networks, cross validation
- Day 4:** Advanced learning algorithms- e.g. Extending decision tree and covering algorithms, Support Vector Machines and Clustering, Bayesian networks
- Day 5:** Case studies: e.g. data stream learning, web mining, text mining, ubiquitous data mining, machine learning for NLP

Course Faculty

Eminent faculty drawn from Industry and Academic Community

Course Fee

RS. 7500/- for participants from industry and R&D organizations
RS. 5000/- for non-student participants from academic institutions
RS. 3000/- for students

(Remit by Demand Draft in favour of Director, IIITM-K, payable at Trivandrum)

No. of Seats: 30

Venue: IIITM-K, Technopark , Thiruvananthapuram

Course Timings:

This program practice oriented and there shall be a mix of lab and theory sessions. The classes and labs are from 9.00AM 04.00 PM on Monday to Saturday.

Facilities

The course will be conducted at the Institute's premises in Technopark campus, Trivandrum. The Institute has spacious classrooms, Library and an exclusive Computer Lab with data mining and machine learning facilities. All participants will be provided access to a fully equipped Data mining and Machine Learning Laboratory during the course.



About IIITM-K

Indian Institute of Information Technology and Management - Kerala [IIITM-K] is a premier institution of excellence in Science, Technology and Management related to Information that develops professionals and leaders of high calibre imbued with values of entrepreneurship, ethics and social responsibility. IIITM-K was established by the Government of Kerala in the year 2000. The Institute's goal has been to be state of art in IT and its applications in science, industry and society through research, projects and teaching. The opening up of IIITM-K's courses to IT professionals and the academia is an important and logical extension of the Institute's commitment to promote technology-enhanced education in the State.



Library

The Institute's library has enviable collection of technical books, e-journals, Standards, e-theses, CD-ROMs, and video lectures. The library hosts around 2500 books in IT and Management, over 800 CD-ROMS, and over 200 Industry Manuals. Digital Library has access to nearly 6000 journals from professional societies like IEEE, ACM, OpenJ-Gate, and other sources. The MuDil Multimedia Digital Library has a collection of more than 1000 hours of video lectures. The Institute Software library has more than 10,000 software products. Additional library resources include inter-library membership and online searching. Classroom lectures, seminars, invited lectures of the Institute are



How to apply

Applicants are requested to fill the registration form available online at <http://www.iiitm.ac.in/shortcourse> and send the hard copy of the application along with the DD by post or hand over personally to the following address.

**The Coordinator,
Data Mining and Machine Learning**

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