

# Registration Form



Name .....

Designation & Division .....

Organization .....

Area(s) of Expertise .....

Any other Information .....

## Contact Details

Email .....

Correspondence Address .....

City ..... State .....

Pincode ..... Country .....

Office No. .... Mobile No. ....

## Payment Details

DD No. .... DD Date .....

Bank Name .....

Bank Branch ..... Bank City .....

Office use only

C-DAC Receipt No. and Receipt Date .....

## Knowledge Based Computer Systems Division

The Knowledge Based Computer Systems (KBCS) division carries out research and development in selected subfields of Artificial Intelligence. Its core areas of research include Natural Language Processing, Expert Systems, Case Based Reasoning, Information Retrieval, Data Mining, Soft Computing, and Planning and Scheduling.

## About C-DAC, Mumbai

The Centre for Development of Advanced Computing, Mumbai (formerly National Centre for Software Technology) is a scientific society involved in the Research and Development into various areas of Software Technology and related disciplines. The Centre focusses on advanced information technologies, and high end academics and training. The major areas of research at the Centre include artificial intelligence, e-learning, open source software including accessibility, information security, and software engineering.

## Contact Us

### Course Administration

**Centre for Development of Advanced Computing (Formerly NCST)**  
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```
fully_trained = FALSE
DO UNTIL (fully_trained)
  fully_trained = TRUE
  FOR EACH training_vector = <X1, X2, ..., Xn, theta, target>::
    # Weights compared to theta
    # According to the training rule
    alpha = (X1 * W1) + (X2 * W2) + ... + (Xn * Wn) - theta
    y = sigma(alpha)
    IF y != target:
      fully_trained = FALSE
  FOR EACH WI:
    MODIFY WEIGHT(WI)
```

Workshop On

# MACHINE LEARNING

C-DAC Kharghar, Navi Mumbai  
**December 19-20, 2008**

## Machine Learning

Machine Learning (ML) is a subfield of artificial intelligence (AI) that is concerned with the design and development of algorithms and techniques that allow computers to "learn". ML is one of the active areas of research in computer science and currently has a large repository of practically useable techniques and algorithms for a wide range of tasks. Typical ML problems include automatic clustering of a set of items, automatic classification (spam mail, documents, etc.), automatic learning/refinement of rules for a diagnostic system, predictive modelling, etc.

ML methods have evolved from various domains such as Statistics, Information theory, Biology and Control theory. ML has a wide spectrum of applications including natural language processing (NLP), pattern recognition, search engines, medical diagnosis, bioinformatics and chemical informatics, fraud detection, stock market analysis, speech and handwriting recognition, robotics, intelligent computer games etc.

## About the Workshop

The workshop is meant to provide a comprehensive introduction to Machine Learning, focusing on conceptual understanding of popular ML algorithms and practical applications. Apart from covering popular ML techniques such as Artificial Neural Network (ANN), Support Vector Machine (SVM) and Clustering we will discuss modelling of a problem for using machine learning including input-output transformation. Participant will get hands on experience with these algorithms; using toolkits such as *Weka*.

## Workshop Outline

- Introduction to Machine Learning
- Inductive Learning
- Artificial Neural Network
- Support Vector Machine
- Clustering
- Input-output transformation for ML
- Application case studies
- Lab sessions

## Target Audience

The workshop is targeted at academic and industry professionals interested in Machine Learning; professionals working in the area of information retrieval, language processing, document analysis, speech recognition and students interested in the area of Machine Learning. Some familiarity with computer programming will be desirable; language does not matter.

## Accommodation Availability

Limited shared Non-A/C accommodation is available at the Navi Mumbai Campus Hostel, at Rs. 150/- per head per day.

## Registration Details

Registration Fee: Rs. 1000/- per participant for academic & non-profit organizations, and Rs. 1500/- per participant for others, payable by a crossed demand draft drawn in favour of 'C-DAC Mumbai' payable at Mumbai. The fee covers lunch, refreshments, and workshop material. The complete registration form with fee should be sent to the Course Administration section C-DAC, Kharghar, Mumbai.

