

**PROPOSAL FOR WORKSHOPS****Title of the Workshop: Application of Data Mining in Software Fault Prediction****Date:** 20 July, 2011**Duration:** 1 day for 6 hours**Venue:** Chitkara University, Punjab, India**Expected Number of Participants: 40****Objective of the workshop:**

It is to make the participants familiar with the various concepts of data mining and software engineering. Moreover, they will get hands on experience of applying data mining techniques for software engineering problems. Case studies and laboratory sessions will be conducted along with lectures and discussions.

Brief Technical Description of the Workshop:

Software engineering is the technique of developing software using engineering techniques. In the world of complex real time software applications, building software within budget and schedule, and of acceptable quality, is the ultimate challenge for software project managers. This workshop aims to bridge the gap between software development as understood by students (exploratory style) and use of engineering techniques as required by any professional software developer. Also, in the era of large databases, data mining is gaining world wide acceptance as a tool to analyze data and extract useful information from it. In the area of data mining clustering is an important tool. Clustering is the method of grouping the data into sets so that data points within the set should have high similarity while those within different data sets are dissimilar. Examples of clustering applications include pattern recognition, data analysis, image processing, market research, business.

In this workshop we will demonstrate the application of data mining for software fault prediction and other software engineering problem domains. It will benefit the students who in spite of studying software engineering are

unaware of the practical aspects of it. They will be exposed to various software engineering concepts (through simple case studies) and data mining techniques (through laboratory sessions). This would enable them to develop more reliable and maintainable software, taking them a step closer to the industry professional that they are going to be in future. This workshop will be of immense help to the researchers engaged in different areas of software engineering as well as the corporate delegates to adopt new techniques. The collaboration between academia and industry is what we aim for in this workshop.

Description of past versions of the workshops, including URLs as well as Submission and acceptance counts:

1. Software Engineering Student Workshop, March 2007, 25 Participants.
2. Data Mining Workshop, November 2010, 30 Participants.

Target Audience:

- Students
- Research Scholars
- Faculty Members
- Corporate Delegates

Brief Course Contents:

Topic 1 Introduction to Software Engineering Basics

Topic 2 Introduction to Data Mining Basics

Topic 3 Software Fault Prediction

Topic 4 Data Mining and Software Fault Prediction

Lecture/Training Schedule:

Date	Session	Topic	Resource Person
20-7-2011	Hour 1	Introduction to Software Engineering Basics	VB
	Hour 2	Hands On	VB /PSB
	Hour 3	Introduction to Data Mining Basics	PSB
20-7-2011	Hour 4	Software Fault Prediction	VB
	Hour 5	Data Mining and Software Fault Prediction	PSB
	Hour 6	Hands On	PSB / VB

Details of the Expert Faculty Proposed:

Dr. (Mrs).Vandana Bhattacharjee, Associate Professor, Department of Computer Science, Birla Institute of Technology, Ranchi 834 001

Mr. Partha Sarathi Bishnu, Assistant Professor, Department of Computer Science, Birla Institute of Technology, Lalpur, Ranchi 834 001

Fee per Participant:

Delegates from HPAGC: Rs. 300/-

Delegates from outside: Rs.500/-

DETAILS OF THE WORKSHOP COORDINATOR

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