

**Data Mining - Fall 2003**  
**Instructor: Craig A. Struble, Ph.D.**  
**Labs 8 & 9: Create Your Own Lab**

**Assigned:** November 10, 2003

**Due:** November 24, 2003

## **Introduction**

In this lab, you get to explore an area of data mining that I might have mentioned, you might have read about, or you stumble across over the next few weeks. As you have probably figured out, data mining is a very broad topic, one that cannot be completely covered in a semester (and maybe not for several years).

So, for this lab, you get to create an assignment that will explore some important points of a topic interesting to you. Your audience are future students in the data mining class as well as me.

Some suggested topics for lab assignments include

- Genetic algorithms for clustering, feature selection, etc.;
- Feature selection;
- Relational data mining, inductive logic programming;
- Text mining;
- Web mining;
- Mining large data sets;
- Commercial data mining package tutorial (e.g., Oracle)
- An algorithm not covered, such as support vector machines, rough sets, etc.;
- Spatial data mining;
- Data mining applications;
- Use your imagination.

## **Outcomes**

By completing this lab, students should

- Understand a new area of data mining;
- Gain experience in developing lab assignments;
- Have fun.

## Prepatory Reading

- Any textbook, paper, or web site that discusses an interesting data mining topic.

## Materials

The following materials will be used in this lab:

- Whatever software and data sets are needed by your lab.

## Pre-lab Questions

These questions should be answered before you perform the lab assignment. Record your answers in the introduction section of your lab assignment in your lab notebook.

1. Create exercises that will reinforce the major points of your topic.

## Procedure

This section provides the steps to take for this lab assignment. As you carry out each step, record observations you make in your lab notebook. Your notes do not have to be completed writing, but you'll use them to generate your final lab report. When you work on a data mining problem, it is important to record any steps you take along with observations you make at each step. Remember, it is often the goal of a data mining project to produce a final report. That report includes a summary of the steps you took to achieve your final results.

## Carry Out the Lab

1. Provide steps to carry out the lab assignment. If Weka or R are used, you may assume students know how to use these tools. If another software package is used, you must provide more details instructions.

## Post Laboratory Questions

1. Ask questions that require the completion of the lab for correct answers.