



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING 2060581 DATA MINING LAB

B.Tech.III Year-II Sem

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VISION

To empower the students to be technologically adept, innovative, self-motivated and responsible global citizen possessing human values and contribute significantly towards high quality technical education with ever changing world.

MISSION

M1	To offer high-quality education in the computing fields by providing an environment where the knowledge is gained and applied to participate in research, for both students and faculty.
M2	To develop the problem solving skills in the students to be ready to deal with cutting edge technologies of the industry.
M3	To make the students and faculty excel in their professional fields by inculcating the communication skills, leadership skills, team building skills with the organization of various co-curricular and extra-curricular programmes.
M4	To provide the students with theoretical and applied knowledge, and adopt an education approach that promotes lifelong learning and ethical growth.

LIST OF EXPERIMENTS

TASK 1: CREDIT RISK ASSESSMENT

Description:

The business of banks is making loans. Assessing the credit worthiness of an applicant is of crucial importance. You have to develop a system to help a loan officer decide whether the credit of a customer is good, or bad. A bank's business rules regarding loans must consider two opposing factors. On the one hand, a bank wants to make as many loans as possible.

Interest on these loans is the banks profit source. On the other hand, a bank cannot afford to make too many bad loans. Too many bad loans could lead to the collapse of the bank. The bank's loan policy must involve a compromise: not too strict, and not too lenient. To do the assignment, you first and foremost need some knowledge about the world of credit. You can acquire such knowledge in a number of ways.



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1. Knowledge Engineering. Find a loan officer who is willing to talk. Interview her and try to represent the knowledge in the form of production rules.
2. Books. Find some training manuals for loan officers or perhaps a suitable textbook on finance. Translate this knowledge from text form to production rule form.
3. Common sense. Imagine yourself as a loan officer and make up reasonable rules which can be used to judge the credit worthiness of a loan applicant.
4. Case histories. Find records of actual cases where competent loan officers correctly judged when, and when not to approve a loan application.

THE GERMAN CREDIT DATA:

Actual historical credit data is not always easy to come by because of confidentiality rules. Here is one such dataset, consisting of 1000 actual cases collected in Germany. Credit dataset (original) Excel spread sheet version of the German credit data.

In spite of the fact that the data is German, you should probably make use of it for this assignment.

A few notes on the German dataset

1. DM stands for Deutsche Mark, the unit of currency, worth about 90 cents Canadian (but looks and acts like a quarter).
2. Owns_telephone. German phone rates are much higher than in Canada so people own telephones.
3. Foreign worker. There are millions of these in Germany (many from Turkey). It is very hard to get German citizenship if you were not born of German parents.
4. There are 20 attributes used in judging a loan applicant. The goal is to class if the application to one of two categories, good or bad.

COURSE OUTCOMES

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Course Outcome

- C327.1 Identify different preprocessing techniques on real world datasets.
- C327.2 Use Association rule Mining Algorithms for any real-world data set
- C327.3 Predict similarity of attributes by using simple k-means clustering
- C327.4 algorithm on any data set. 7.4 Design classification models using j48, id3, Naïve Bayes algorithms.
- C327.5 Choose and employ suitable data mining algorithms to build analytical applications.



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PROGRAM EDUCATIONAL OBJECTIVES

PEO1	To induce strong foundation in mathematical and core concepts, which enable them to participate in research, in the field of computer science.
PEO2	To be able to become the part of application development and problem solving by learning the computer programming methods, of the industry and related domains.
PEO3	To gain the multidisciplinary knowledge by understanding the scope of association of computer science engineering discipline with other engineering disciplines.
PEO4	To improve the communication skills, soft skills, organizing skills which build the professional qualities, there by understanding the social responsibilities and ethical attitude.

PROGRAM SPECIFIC OUTCOMES

PSO1- APPLICATIONS OF COMPUTING:

Ability to use knowledge in various domains to provide solution to new ideas and innovations.

PSO2- PROGRAMMING SKILLS:

Identify required data structures, design suitable algorithms, develop and maintain software for real world problems.

PSO3-EXECUTIVE SKILLS:

Make use of computational and experimental tools for creating innovative career paths, to be an entrepreneur and desire for higher studies.

Do's & Don'ts

- Switch off the power and unplug equipment before performing service.
- Know where the fire extinguisher is located and how to use it.
- Report fires or accidents to your lecturer/laboratory technician immediately.
- Avoid food and drinks from your workspace.
- Systems operate under normal room temperature.
- Computer lab room's floor should be clean, dry and dust free.
- No one is allowed to delete information from the computer.
- Enter the computer lab quietly and work quietly.
- Do not change computer settings or backgrounds.
- Don't plug in external devices without scanning for computer viruses.
- SAVE all unfinished work to a cloud drive or jump drive.