# North Asian International Research Journal Consortium

## North Asian International Research Sournal

## Øf

## Science, Engineering and Information Technology

Chief Editor Dr. Bilal Ahmad Malik

Publisher

Dr. Bilal Ahmad Malik

Associate Editor

Dr.Nagendra Mani Trapathi

NAIRJC JOURNAL PUBLICATION

North Asian International Research Journal Consortium

### Welcome to NAIRJC

#### ISSN NO: 2454 -7514

North Asian International Research Journal of Science, Engineering & Information Technology is a research journal, published monthly in English, Hindi. All research papers submitted to the journal will be double-blind peer reviewed referred by members of the editorial board. Readers will include investigator in Universities, Research Institutes Government and Industry with research interest in the general subjects

### **Editorial Board**

M.C.P. Singh	S.P. Singh	A. K. M. Abdul Hakim
Head Information Technology Dr C.V.	Department of Botany B.H.U. Varanasi.	Dept. of Materials and Metallurgical
Rama University		Engineering, BUET, Dhaka
Abdullah Khan	Vinay Kumar	Rajpal Choudhary
Department of Chemical Engineering &	Department of Physics Shri Mata Vaishno	Dept. Govt. Engg. College Bikaner
Technology University of the Punjab	Devi University Jammu	Rajasthan
Zia ur Rehman	Rani Devi	Moinuddin Khan
Department of Pharmacy PCTE Institute	Department of Physics University of	Dept. of Botany SinghaniyaUniversity
of Pharmacy Ludhiana, Punjab	Jammu	Rajasthan.
Manish Mishra	Ishfaq Hussain	Ravi Kumar Pandey
Dept. of Engg, United College Ald.UPTU	Dept. of Computer Science IUST, Kashmir	Director, H.I.M.T, Allahabad
Lucknow		
Tihar Pandit	Abd El-Aleem Saad Soliman Desoky	M.N. Singh Director School of Science
Dept. of Environmental Science,	Dept of Plant Protection, Faculty of	UPRTOU Allahabad
University of Kashmir.	Agriculture, Sohag University, Egypt	
Mushtaq Ahmad	Nisar Hussain	M.Abdur Razzak
Dept.of Mathematics Central University of	Dept. of Medicine A.I. Medical College	Dept. of Electrical & Electronic Engg.
Kashmir	(U.P) Kanpur University	I.U Bangladesh

Address: -North Asian International Research Journal Consortium (NAIRJC) 221 Gangoo, Pulwama, Jammu and Kashmir, India - 192301, Cell: 09086405302, 09906662570, Ph. No: 01933-212815, Email: nairjc5@gmail.com, nairjc@nairjc.com, info@nairjc.com Website: www.nairjc.com

North Asian International research Journal consortiums www.nairjc.com

2

## AN ELECTIVE SUBJECT SUGGESTION SYSTEM USING FUZZY LOGIC

### PROF. SULBHA GHADLING<sup>1</sup>, SUMEET KAMBLE<sup>2</sup>, PRAJAKTA MITHARI<sup>3</sup>, RUPALI SHISODE<sup>4</sup> & YOGESHWARI WABLE<sup>5</sup>

<sup>12345</sup>[NMIET], Savitribai Phule, Pune University, Pune, India

#### **ABSTRACT**

Every educational institute generates huge bulky data related to all the students getting education from the institute. Though much data produced may be worthless, the institute can use some valuable information to provide better education. Data mining can be employed for such purposes so that key knowledge can be extracted for future use.

Difficulty arises for the engineering students when they reach the final year. They are made to choose electives as their subjects. Students may know nothing about what the knowledge the subject represent for. This may create for them as the electives have considerable values in the grading system too and if the student fails to choose the appropriate elective then it may affect the final grades.

To eliminate this trouble, a beneficial system is planned to develop. The main objective is to help the pupils select the righteous electives in their final year of engineering and data mining concepts would be useful to gain key information about the students on the basis of which the proper elective can be pointed out.

#### **INTRODUCTION**

Data from the transcripts of students are implemented, and using this information a relationship is conducted between the respective courses and their elective subjects taken previously by the student. Rules are extracted with the help of data mining techniques and an elective subject suggestion system is implemented by using fuzzy logic. Successful results are obtained from the test, it is discovered that the scholars made from the individual

courses also are made within the connected elective ones. This project is we have to choose elective subject with the help of college marks and university marks. In this project students easily find out his elective subject with the help of android application. Any institute providing education in engineering field can utilize this application for facilitating better guidance with accordance to the student's skills. Universities also offer selected courses chosen by the candidate. In their junior study, since students are not trained about the selective courses, they lack data about the description and component of the course and generally fail to take the particular ones for their course of study. As a solution, using the knowledge of the last courses taken by the candidate it is possible to guide the student about selective courses particular for him/her. In this study, data from the transcripts of candidate are implemented, and using this data a relationship is conducted between the courses and the selective courses taken last by the student. Guideline are extracted by the help of data mining and an selected course recommendation system is created by the help of fuzzy logic. Successful results are obtained from the tests; it is observed that the students successful from the courses are also fruitful in the similar selected subject. Undergraduate syllabus of nearly all of the programs in a university incorporate selected courses award in an selected course group and to be taken by the candidate. However, many of the universities in Turkey do not have an advise system, exclusively in the undergraduate level, to counselor the student about the elective courses adaptable with their territory of study, their career ratio and their ability. The candidate are neither well knowledgeable about the component of the selected courses nor advise about which course to take hence they select the courses themselves with a few information about the course. And as specified in exploration, the Admin is a barricade to approval in training courses which means there is few of advise for students. Rather, if the student would take an select course correct with his pasture of activity that would be better for his course of study. Implementing the courses the student has completed, it is possible to calculated the student's abilities and activity. The technical selective and the courses that the student has last taken and been successful can be implemented. In order to create a system of this kind, idea system tested in detail. A idea system is a system which makes ideas selecting one or more objects present in the system.

In aide a system, it is very useful to calculate the exchange correctly. This can only be proficient by intensive learning of the model, and testing it eventually. Beginning a communication between two courses according to only the capacity of the courses, without any implementing and testing development, would be a less-detailed and an specially false answer. Course outcomes, deceitful return of the course on the students, and student notion on associate courses are important. For example Pierre et al., in their study they did a analysis to Electrical and Computer Engineering students to collect data about performance of the course .Therefore, communication

between courses may change in time according to student profile. So, the rules separate here, and the results accessed may not be valid for all times, and also, because of the course components. One can draw a conclusion about a student's capabilities, his habit against a course and his success, testing the other courses he has taken last. This study is not aimed to search how the student can be more successful, but it is aimed to calculate a communication between courses by testing last courses taken by the student, and the student success in these courses. Student's last courses and the student's skills are found to be determinants of student's success in a course-grade data of a student having bad grades in all of his courses would collapse the decision tree and have a bad effect on the lows. Therefore, uncertain input that will affect the results thoroughly is not concluded in the system. An uncertain input can be easily described: A student with a very low grade point moderate, and has bad grades from the familiar courses can be accepted as an uncertain input.

#### **RELATED WORK:**

An educational institution needs to have almost prior information of enrolled students to conclude their improvement in future academics. This helps them to identify assuring students and also provides them an contingency to pay attention to and improve those who would apparently get lower grades. As a answer, we have created a system which can conclude the improvement of students from their previous improvement using theory of data mining systems under allocation. We have implement the data set containing data about candidate, such as gender, marks scored in the board examinations of classes X and XII and rank in entrance examinations and results in first year of the last batch of students. Information allocation is a form of data implement that can be used to extract models detail important data classes. There are many allocation algorithms but decision tree is the most used algorithm because of its ease of employment and easier to know related to other allocation algorithms.C4.5 is one of the most useful allocation method. In this paper we are analyzing this algorithm using weka data mining tool using public datasets of various size. This paper also gives judgment into the rate of efficiency it provides when a dataset comprise noisy data, missing data and large amount of data. an effective lecture classification method based on users' profiles and utilities in selective subjects. In many universities, selective subjects technologies are employed as a curriculum in which students make their own learning involvement. Students select various subjects based on their ability and desire. Current calculation systems have strong condition in terms of follow users multiple alternative. We propose a new calculation algorithm and a user support system depend on users' profiles and multi attribute alternative. When users alternative are not reflected

in algorithm-based calculation, a designation agent decides lecture classification accordingly with each user's agent. Main interest of our system is mainly that lectures are classification definitely, that is reflected users' multiple alternative.

The systems aimed for operating large number of courses and students are called training Management Systems. A TMS can have excellent improvement complete through advanced Web technologies but it is often guide by a poor or rarely used archive of institution's educational component. It has still remained. Still remains a problem how to accept users of a TMS to simple evaluated and centralize the component from organized e-learning repository into their courses. This article presents an implement of present repository frameworks and projects. FEDORA framework is described as another depository answer. The course commendation system in e-learning is a system that advocates the best sequence of subjects in which the students are ability.

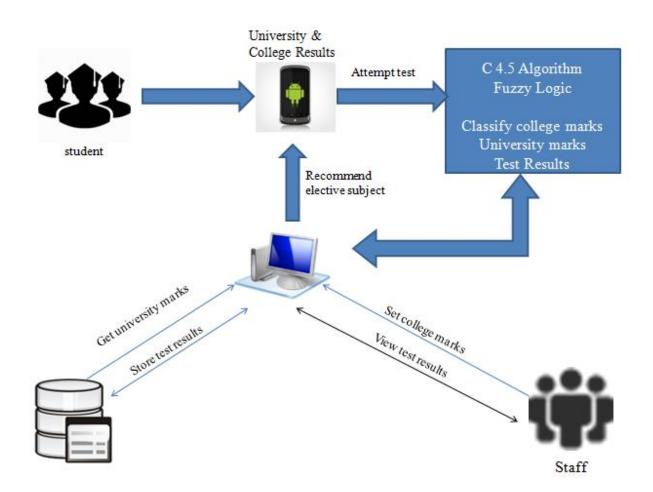
In this paper, we propose a framework for commendation of courses in the E-learning technique. In our access we collect the data for example candidate recruitment for a specific set of course. After getting information, we use various sequence of algorithm & we implement the suitability of sequence applied for commendation. In this paper we outline our architecture & we apply the cooperative rule mining at fundamental parts.

ACO is proved to be impressive in solving many development problems, here we show that ACO also in the problem of prevision of final grades students collect on execute university courses is able to distribute good answer. To apply ACO in any proposition system wended special problem presentation in form of a graph, where each node represents a decision in the problem domain.

Students often need training in selecting satisfactory courses to entire their intellectual degrees. Course recommender techniques have been proposed in the literature as a tool to help students make knowledgeable course selections. Although a different of system have been planned in these course recommender systems, combinative data mining with user ratings in order to improvement the recommendation has never been done before. This paper instant *RARE*, a course recommend system based on organization rules, which integrate a data mining process together with user ratings in endorsement. Starting from a history of real data, it determine significant rules that companion academic courses followed by former students. These concepts are later used to assume recommendations. In order to assistance from the current students' notion, *RARE* also offers to users the action to rate the recommendations, thus leading to a performance of the rules. Therefore, *RARE* combines the

advantages of both former students' experience and current students' ratings in procedure to propose the most momentous courses to its users.

#### SYSTEM ARCHITECTURE:



#### **CONCLUSION:**

For translation of a number of students are examined, and it is observed that the success of students in their last appropriate courses affect their success in selective courses. Grade range of 0-4, shows the success of the student, and is particular into three groups as Low, Middle and High. Grouping the grades in this way generate more adequate results. C5.0decision tree algorithm is used to calculate, on the basis of these groups, success in which

courses are active on which select courses. Rules are derive in fuzzy logic using the decision trees. The elective course resolution system developed here can be used to help undergraduate students of Computer Engineering program to choose the elective courses from the fields they are successful at. Improvement of the model is calculated by ROC implement, and the model found to be successful at rates from 88% to68%. ROC implement has showed that the model gives better results when the actual result is Low. Then the method would guide the student about the courses from which he would be more apparently unsuccessful, so the anticipation of student failure from a course can be decrease.

#### **FUTURE SCOPE:**

To develop an android application for elective subject selection for students. The purpose of this application is to guide students for final year elective subject selection of all branches. Developing the web portal from which tests questionnaires can be updated and previous results can be updated. (Visible to teachers).

#### **REFERENCE:**

[1] M. Fatih Adak, NejatYumusak, HarunTaskin," An Elective Course Suggestion System Developed in Computer Engineering Department Using Fuzzy Logic",2016.

[2] Kalpesh Adhatrao, Aditya Gaykar, Amiraj Dhawan, RohitJha and Vipul Honrao," PREDICTING STUDENTS PERFORMANCE USING ID3 AND C4.5 CLASSIFICATION ALGORITHMS", Vol.3, No.5, September 2013.

[3] 1Harvinder Chauhan, 2Anu Chauhan," Implementation of decision tree algorithm c4.5", Volume 3, Issue 10, October 2013.

[4] Tokuro Matsuo, Takayuki Fujimoto," An Effective Lecture/Class Allocation Method based on Users Profiles in Elective Subjects", 2005.

[5] Kreimir Fertalj, Nataa Hoi-Boi, and Hrvoje Jerkovi," The Integration of Learning Object Repositories and Learning Management Systems", June 2010.

[6] Sunita B Aher, Lobo L.M.R.J.,"A Framework for Recommendation of courses in E-learning System", Volume 35 No.4, December 2011.

[7] Janusz Sobecki and Jakub M. Tomczak," Student Courses Recommendation Using Ant Colony Optimization",2010.

[8] Narimel Bendakir and Esma Ameur," Using Association Rules for Course Recommendation", 2006.

[9] JOHN B. GOODENOUGH AND SUSAN L. GERHART," Toward a Theory of Test Data Selection", VOL. SE-I, No.2, JUNE 1975.

[10] MARTIN C. GOLUMBIC, MOSHE MARKOVICH, SHALOM TSUR, AND URI J. SCHILD," A Knowledge-Based Expert System for Student Advising", VOL. E-29, NO. 2, MAY 1986.

9

### **Publish Research Article**

Dear Sir/Mam,

We invite unpublished Research Paper,Summary of Research Project,Theses,Books and Book Review for publication.

Address:- North Asian International Research Journal Consortium (NAIRJC) 221, Gangoo Pulwama - 192301 Jammu & Kashmir, India Cell: 09086405302, 09906662570, Ph No: 01933212815 Email:- nairjc5@gmail.com, nairjc@nairjc.com , info@nairjc.com Website: www.nairjc.com

