Authors:-A.O.Ogunde, and D.A .Ajibade.

Paper:-" Data Mining System for Predicting University Students"Graduation Grades Using ID3 Decision Tree Algorithm. Journal of Computer Science and Information Technology, 2015.

* The desire of every organization is to extract hidden but useful knowledge from
* their data through data mining tools. Also, the recent decline in the standard of
* education in most developing countries has necessitated researches that will help
* proffer solutions to some of the problems. From the literature, different analysis has
* been carried out on university data, which includes student’s university entrance
* examination and Ordinary level results but the relationship between these entry
* results and students’ final graduation grades has been in isolation. Therefore, in this
* work, a new system that will predict students’ graduation grades based on entry
* results data using the Iterative Dichotomiser 3 (ID3) decision tree algorithm was
* developed. ID3 decision tree algorithm was used to train the data of the graduated
* sets. The knowledge represented by decision trees were extracted and presented in
* form of IF-THEN rules. The trained data were then used to develop a model for
* making future prediction of students’ graduation grades. The developed system
* could be very useful in predicting students’ final graduation grades even from the
* point of entry into the university. This will help management staff, academic
* planners to properly counsel students in order to improve their overall performance.

Authors:-R.S.J.D.Baker.

paper:-"Data mining for education. International encyclopedia of

education", 7, 112-118, 2010.

* Data mining techniques are used to extract useful knowledge from raw data. The extracted knowledge is valuable and significantly affects the decision maker. Educational data mining (EDM) is a method for extracting useful information that could potentially affect an organization.
* The increase of technology use in educational systems has led to the storage of large amounts of student data, which makes it important to use EDM to improve teaching and learning processes.
* EDM is useful in many different areas including identifying at-risk students, identifying priority learning needs for different groups of students, increasing graduation rates, effectively assessing institutional performance, maximizing campus resources, and optimizing subject curriculum renewal.
* This paper surveys the relevant studies in the EDM field and includes the data and methodologies used in those studies.

Authors:-R.S.J.D.Baker, and Kalina Yacef.

Paper:-"The state of educational data mining in 2009: A review and future visions". JEDM-Journal of Educational Data Mining, 3-17, 2009.

* We review the history and current trends in the field of Educational Data Mining (EDM). We consider the methodological profile of research in the early years of EDM, compared to in 2008 and 2009, and discuss trends and shifts in the research conducted by this community.
* In particular, we discuss the increased emphasis on prediction, the emergence of work using existing models to make scientific discoveries (discovery with models), and the reduction in the frequency of relationship mining within the EDM community.
* We discuss two ways that researchers have attempted to categorize the diversity of research in educational data mining research, and review the types of research problems that these methods have been used to address.
* The mostcited papers in EDM between 1995 and 2005 are listed, and their influence on the EDM community (and beyond the EDM community) is discussed.

Authors;-P.Cortez and A.Silva.

paper:-"Using Data Mining to Predict Secondary School Student Performance", 2008. In A. Brito and J. Teixeira Eds. Proceedings of 5th FUture BUsiness TEChnology Conference,5-12, Porto, Portugal EUROSIS, ISBN 978-9077381-39-7, 2008.

* Although the educational level of the Portuguese pop-ulation has improved in the last decades, the statistics keep Portugal at Europe's tail end due to its high stu-dent failure rates. In particular, lack of success in the core classes of Mathematics and the Portuguese lan-guage is extremely serious
* . On the other hand, the fields of Business Intelligence (BI)/Data Mining (DM), which aim at extracting high-level knowledge from raw data, offer interesting automated tools that can aid the education domain.
* The present work intends to ap-proach student achievement in secondary education us-ing BI/DM techniques. Recent real-world data (e.g. student grades, demographic, social and school related features) was collected by using school reports and ques-tionnaires.
* The two core classes (i.e. Mathematics and Portuguese) were modeled under binary/five-level clas-sification and regression tasks. Also, four DM mod-els (i.e. Decision Trees, Random Forest, Neural Net-works and Support Vector Machines) and three input selections (e.g. with and without previous grades) were tested.
* The results show that a good predictive accuracy can be achieved, provided that the first and/or second school period grades are available. Although student achievement is highly influenced by past evaluations, an explanatory analysis has shown that there are also other relevant features (e.g. number of absences, parent's job and education, alcohol consumption).
* As a direct out-come of this research, more efficient student prediction tools can be be developed, improving the quality of ed-ucation and enhancing school resource management.

Authors:-Mr.M.N.Quadri and Dr.N.V.Kalyankar.

Paper:-"Drop Out characteristics of Student Data for Academic Performance Using Decision Tree Techniques". Global Journal of Computer Science and Technology, 2010.

* Students’ academic performance is critical for
* educational institutions because strategic programs can be
* planned in improving or maintaining students’ performance
* during their period of studies in the institutions. The academic
* performance in this study is measured by their cumulative
* grade point average (CGPA) upon graduating. This study
* presents the work of data mining in predicting the drop out
* feature of students. This study applies decision tree technique
* to choose the best prediction and analysis. The list of students
* who are predicted as likely to drop out from college by data
* mining is then turned over to teachers and management for
* direct or indirect intervention.