By this above information, one can predict the student performance in his final grade by his behaviors' and term exams scores. Especially grade 1 and grade 2 plays main role in student's performance and the factor absences due to health issues lead a student to fail.

4. CONCLUSION

In this paper, student's performance data has taken for an experiment to find out the effectiveness of rough set theory in the prediction. Because the earlier researcher also dealt with the same data in order to find the prediction. In that case they used Random forest and SVM algorithm to derive the rules by decision trees by employing Rminer tool. Here in our experiment we used Rough set approach which reduced the size of the attributes without loss of information. With the minimum number of attributes we could derive the decision rules which provide us the useful information about the student's performance. Here the decision rules are precise than the rules found in [Cortez *et al*]. Ignorance of some variables (eg. Parent job, reason to choose school) not related to student performance helps to predict their performance to better accuracy.

Also the classification accuracy was improved by the reduction concept of rough set theory that assures the decision rules consistent. This proves in the matter of prediction, the Rough set theory approach for data analysis is the simpler and efficient than other algorithms. RST is a useful tool for analyzing big datasets and classification which has multivariate attributes. This research will extend to the more application area of the Rough set theory in future.

ACKNOWLEDGEMENT

REFERENCES

[1]   Caner Erden, Fatih Tüysüz, 'An Application Of Rough Sets Theory On Traffic Accidents'An InternationalConference on Engineering and Applied Sciences Optimization, 2014.
[2]   Cortez.P and A. Silva. Using Data Mining to Predict Secondary School Student Performance. In A. Brito and J. Teixeira Eds., Proceedings of 5th FUture BUsiness TEChnology Conference (FUBUTEC 2008) pp. 5-12, Porto, Portugal, April, 2008, EUROSIS, ISBN 978-9077381-39-7.
[3]   Fayyad.U, G. Piatetsky-Shapiro, P.Smyth, and R. Uthurusamy , 'In Advances in Knowledge Discovery and Data Mining.', 307–328. Menlo Park, Calif.: AAAI Press
[4]   Grzymala-Busse, J.W. & Stefanowski, J., (2001), Three Discretization Methods for Rule Induction. International Journal of Intelligent Systems, 16, 29-38.
[5]   Ilczuk ve.G, A. Wakulicz-Deja, 'Rough Sets Approach to Medical Diagnosis System' AWIC, pp. 204-210, 2005
[6]   lomiej Pr¸edki, Roman S lowi´nski, Jerzy Stefanowski Robert Susmaga, Szymon Wilk 'ROSE - Software Implementation of the Rough Set Theory Bart ' RSCTC'98, LNAI 1424, pp. 605–608, 1998
[7]   Maciocha, A and Kisielnicki, J. "Intellectual Capital and Corporate Performance" The Electronic Journal of Knowledge Management Volume 9 Issue 3 (271-283)
[8]   Mert Bal, 'Rough Sets Theory as Symbolic Data Mining Method: An Application on Complete Decision Table', Inf. Sci. Lett. 2, 1, 35-47 (2013).
[9]   Michael Lloyd-Williams, Discovering the hidden secrets in your data - the data mining approach to information, "Information Research" (1997)
[10] Pawlak.Z, 'Classification of Objects by Means of Attributes' Polish Academy of Sciences, Warsaw, 1981
[11] Pawlak.Z, «Rough Sets and Intelligent Data Analysis,» Information Sciences, Vol 147, no. 1, pp. 1-12, 2002.
[12] Pawlak.Z, «Rough Sets,» Int. Journal of Computer and Information Sciences, Vol 11, pp. 341-356, 1982.
[13] Pawlak.Z, 'Rough Set Approach to Knowledge-Based Decison Support,' European Journal of Operational Research, Vol 99, pp. 48-57, 1997.
[14] Pawlak.Z, Rough sets, International Journal of Computer and Information Sciences, Vol 11, pp. 341-356, 1982.
[15] Pawlak.Z, Rough Set Theory And Its Applications To Data Analysis, Cybernetics and Systems: An International Journal, Vol 29, no. 7, pp. 661-688, 1998.
[16] Sudha.M , A. Kumaravel, 'Performance Comparison based on Attribute Selection Tools for Data Mining', *Indian Journal of Science and Technology, Vol 7(S7), 61–65, November 2014.*