Application of Data Mining Methods for Discovering Knowledge in Geological Sciences: a tentative rules of Iran

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New studies and use of modern geological , geophysical, geomorphological and other earth scinces methods, have been produced a huge mass of data. The tremendous amount of data, collected and stored in large and numerous data repositories, has far exceeded human ability for comprehension without powerful tools. In the other, it is impossible to extract some types of hidden knowledge using conventional data analysis tools. To overcome this shortcoming, data mining methods has been applied for tectonic and seismotectonic attributes of Iran. Empirical application of data mining methods reveals interesting and useful rules. For example, the results indicate that the elevation, regional bouger anomaly and isostatic anomaly show more significant relationships with the earthquake activity in Iran. The results also suggest that there is a connection between the fault length density, a- and b- values (Gutenberg-Rishter formula).

Keywords: Data Mining, Geological Scinces, Iran.