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Researching the Use of Artificial Intelligence in Predicting the Pollution Distribution of Settlements

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Abstract – Accurate prediction of the pollution analysis to be made with the data to be obtained as a result of experimental studies is of great importance in terms of time and cost advantages. In this study, a model has been developed to predict regional pollution values with artificial intelligence approach. An artificial neural network model has been developed using previously obtained experimental data. In the developed network model, mercury, distance from the pollution source, pollution source, the characteristics of the sample location and the primary factor controlling the moving parameters were accepted as the input variables and the geo-accumulation index values were estimated. Accuracy analysis was performed by comparing the estimation results with the experimental data. The obtained results have shown that artificial neural networks are the ideal engineering tool that can be used in the estimation of pollution values.

Keywords – Heavy metal, mercury, artificial neural network, Bayesian algorithm, Konya