

ABSTRACT

From the data kept in the powerful database tools, we find the hidden features or characteristics of these data that we can not find from functions in the existing database tools.

This research proposes the framework to classify the student's academic records of students for unveiling how Mathematics and English background affects to the achievement of students in Assumption University.

Kohonen network was used to find the map of activated output neurons and to find the clusters from this map. After that we built the models from clusters by multiple regression to predict the value of GPA based on independent attributes. We compared the predicted GPA, which was calculated by model of appropriate cluster (local model) to the model from a whole data (global model). It is shown that the local models predict more accurate than the global model.

We also tested the clustering methodology with Soybean data from UCI database repository, the clustering gave an appropriate result.

The model from a whole data shows that both English and Mathematics strongly influence to the study performance of Assumption University's students and English has more significant influence than Mathematics. Only English or Mathematics affects to the model of some clusters. Some cluster does not depend on English or Mathematics.