

PERMODELAN ESTIMASI BIAYA KONSEPTUAL PROYEK GEDUNG SEKOLAH DENGAN MENGGUNAKAN ARTIFICAL NEURAL NETWORK

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According to Central Bureau of Statistics (Badan Pusat Statistik), in 2015 the population of Special Capital Region of Jakarta was 10,177,900 people with the rate of growth 1.02% per annum. Approximately, 14.7% of the population are students. In order to fulfill the demand of good quality education, the X school foundation develops and builds new schools continuously, especially in Jakarta and its suburbs. The planning of school development should be done well. One of the first step is to conduct a feasibility study. Conceptual cost estimation is important at this stage. There are some difficulties in estimating the cost at the conceptual stage, such as the lack of preliminary information about the project, lack of project cost data, incomplete data, et cetera. The purpose of this study is to create model using Artificial Neural Network To determine the input variables, analysis factors were used. After that, the model was created by using Matlab software. This research was conducted by collecting 15 data of school building projects. The result of this study shows the best Artificial Neural Network model is network architecture 7-5-1 with backpropagation algorithm.

Keywords: cost estimation, artificial neural network