# ABSTRAK

## IMPLEMENTASI METODE *BACKPROPAGATION NEURAL NETWORK* PADA PREDIKSI INDEKS HARGA SAHAM BANK RAKYAT INDONESIA



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Nilai saham Bank Rakyat Indonesia merupakan salah satu saham dengan nilai jual yang stabil. Penelitian ini bertujuan untuk menentukan *model backpropagation neural network* paling sesuai dan memperoleh arsitektur jaringan terbaik dalam memprediksi harga indeks saham Bank Rakyat Indonesia. Model ini dilatih dengan menggunakan data historis dan dievaluasi dengan menggunakan berbagai metrik performa, seperti *Mean Absolute Percentage Error* (MAPE), *Mean Square Error* (MSE), dan *Mean Absolute Percentage Error* (MAPE). Sehingga didapatkan model terbaik berupa MSE 0.000086 dan MAPE 1.42071% pada fungsi aktivasi tanh dengan 3 *input* , 3 *hidden layers* dan 1 *output* dengan data pelatihan 80% (755 data) dan data uji 20% (189 data).



**Kata Kunci :** *jaringan saraf tiruan, backpropagation, prediksi, saham bank rakyat Indonesia*

# ABSTRACT

**THE IMPLEMENTATION OF THE BACKPROPAGATION NEURAL NETWORK METHOD IN THE STOK PRICE INDEX PREDICTION OF BANK RAKYAT INDONESIA**

**By**

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Bank Rakyat Indonesia's stock shares exhibit a stable market value. This research aims to determine the most appropriate backpropagation neural network model and obtain the best network architecture in predicting the price of the Bank Rakyat Indonesia stock index. Historical data is employed for the model's training, and its performance is appraised through the application of various metrics, including Mean Absolute Perentage Error (MAPE), Mean Square Error (MSE), and Mean Absolute Percentage Error (MAPE). The best model was identified as MSE 0.000086 and MAPE 1.42071% in the tanh activation function, with 3 inputs, 3 hidden layers, and 1 output with 80% training data (755 data) and 20% test data (189 data).

**Keywords** *: artificial neural network, backpropagation, prediction, stock price of bank rakyat indonesi*