INTISARI

Perbandingan Prediksi Harga Saham dengan Metode *MultiLayer Perceptron* (MLP) dan *Extreme Learning Machine* (ELM)
(Studi Kasus: Data Harian Harga Saham Tambang Nikel PT Vale Indonesia Tbk (INCO.JK) 28 Juli 2022 – 28 Juli 2023)

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Nikel merupakan konduktor atau penghantar listrik dan panas yang cukup baik. Fenomena kendaraan listrik di Indonesia bahkan di dunia sangat berpotensi memberikan dampak positif terhadap industri pertambangan nikel Indonesia karena Indonesia menjadi penghasil nikel nomor satu. Total produksinya diperkirakan mencapai 1.6 juta metrik ton atau menyumbang 48.48% dari total produksi nikel global. Peningkatan permintaan nikel untuk baterai kendaraan listrik berpotensi berdampak positif pada saham perusahaan tambang nikel di Indonesia khususnya PT Vale Indonesia (INCO.JK). Oleh karena itu perlunya analisis peramalan untuk mengetahui peramalan harga penutup saham PT Vale Indonesia (INCO.JK) dengan menggunakan data harian periode 28 Juli 2022 - 28 Juli 2023 menggunakan metode *MultiLayer Perceptron* (MLP) dan *Extreme Learning Machine* (ELM). Berdasarkan pengujian yang sudah dilakukan, perbandingan metode *MultiLayer Perceptron* (MLP) dan *Extreme Learning Machine* (ELM) jika dibandingkan dengan Nilai *Mean Absolute Percentage Error* (MAPE) pada metode *MultiLayer Perceptron* (MLP) didapatkan nilai sebesar 1.418551%, sedangkan pada metode *Extreme Learning Machine* (ELM) didapatkan nilai sebesar 1.535166%. Hasil menunjukkan bahwa metode *MultiLayer Perceptron* (MLP) tingkat kesalahannya lebih kecil daripada metode *Extreme Learning Machine* (ELM), sehingga metode terbaik untuk digunakan dalam peramalan harga penutup saham PT Vale Indonesia (INCO.JK) adalah *MultiLayer Perceptron* (MLP).

Kata Kunci: *Extreme Learning Machine*, *MultiLayer Perceptron*, Nikel, Peramalan, Saham

ABSTRACT

Comparison of Stock Price Prediction with MultiLayer Perceptron (MLP) and Extreme Learning Machine (ELM) Methods
(*Case Study: Data Daily Price of Nickel Mining Shares* PT Vale Indonesia Tbk (INCO.JK) *28 July 2022 to 28 July 2023*)

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Nickel is a good conductor or transmitter of electricity and heat. The phenomenon of electric vehicles in Indonesia even in the world is very likely to have a positive impact on the Indonesian nickel mining industry because Indonesia is the number one nickel producer. Its total production is estimated to reach 1.6 million metric tons or account for 48.48% of the total global nickel production. Increased demand for electric vehicle batteries will potentially have a positive impact on the shares of nickel mining companies in Indonesia in particular PT Vale Indonesia. (INCO.JK). Therefore, predictive analysis is necessary to know the PT Vale Indonesia (INCO.JK) stock price forecast using data from July 28, 2022 to July 28, 2023 using the MultiLayer Perceptron (MLP) method and Extreme Learning Machine. (ELM). Based on the test, the MultiLayer Perceptron (MLP) and Extreme Learning Machine (ELM) method compared with the Mean Absolute Percentage Error (MAPE) value in the MultiLayer Perceptron method, with a value of 1.418551%, while in the Extreme Machine Learning method, the value was 1.535166%, where the results showed that the MultiLayer Perceptron method has a lower error rate than the Extremely Learning Machine method. (ELM). So the best method to use in PT Vale Indonesia (INCO.JK) stock price forecast is MultiLayer Perceptron (MLP).

Keywords: *Extreme Learning Machine, MultiLayer Perceptron, Nickel, Prediction, Stock*