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TITLE OF PROJECT: **ANN model for compressive strength prediction of concrete using MATLAB**

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ABSTRACT

The proposed research presents a cutting-edge approach to predict concrete compressive strength before casting using an artificial intelligence-based model. The developed model leverages the power of neural network algorithm to accurately predict the compressive strength based on target strength, testing ages (7 and 28), and specimen size. The experimental results demonstrate the effectiveness of the model, with a high R coefficient of 0.9, indicating strong predictability and model accuracy.

By significantly advancing the current methods for predicting compressive strength, this research has the potential to make a significant impact in the field of concrete construction engineering. This approach can provide a more reliable and efficient way to estimate compressive strength, thus improving the quality and safety of structures.

The incorporation of an AI-based model in predicting compressive strength is a novel and innovative approach, which makes this research highly valuable and relevant in today's fast-paced technological landscape.

KEYWORDS: ANN (Artificial Neural Network), MATLAB (Matrix laboratory), Concrete, Compressive Strength.

CATEGORY: Concrete Technology