Doddy Heka Ardana <doddyhekaardana@unr.ac.id>

Submit Manuscript
3 messages

Doddy Heka Ardana <doddyhekaardana@unr.ac.id>   Wed, Nov 24, 2021 at 1:44 PM
To: preview.hrpub@gmail.com, cea.editor@hrpub.org, editor@hrpub.org

Civil Engineering and Architecture
COVER LETTER

Putu Doddy Heka Ardana
Ngurah Rai University
Civil Engineering Department, Ngurah Rai University,
80238, Denpasar, Bali, Indonesia

24th November 2021
Editorial Civil Engineering and Architecture Journal
Horizon Research Publishing (HRPUB)

Dear,
I wish to submit an original research article entitled "Groundwater Level Forecasting Using Multiple Linear Regression and Artificial Neural Network Approach" for consideration by The Civil Engineering and Architecture Journal.

I confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, I show the comparison of Multiple Regression Linear and Artificial Neural Network in groundwater level fluctuation forecasting in Ubung and GOR Ngurah Rai monitoring well for three years (i.e., 2017–2019 and January-October 2015). Simulating groundwater levels prediction using limited hydrometeorological time series data (barometric pressure, evaporation, temperature, wind, bright sunshine, and rainfall) based on the results of previous data screening tests. The screening test is in the form of a trend absence test, stationary, persistence, outlier, and data consistency test. The first method determines the parameters that most significantly influence the groundwater level fluctuation to build a regression model between the predictors and the dependent variable. The second proposed approach is ANNs, where the neural network chosen is the multilayer perceptron that uses the feedforward back-propagation neural network (FFBPNN) as a supervised learning technique for training. The developed model has three-layer structures: one input layer with four and seven neurons, one hidden layer with four, seven, eight, and fourteen neurons and one output layer. Logistic sigmoid (logsig) and linear transfer function (purelin) were used in the hidden and output layers as activation functions. The training algorithm used was gradient descent with momentum and adaptive learning rate (traingdx). The results show that both MLR and ANNs models predict the groundwater level fluctuation at an acceptable correlation coefficient between the actual and predicted groundwater level. However, the ANNs perform better in terms of statistical errors, notably root mean square error (RMSE), mean square error (MSE), and mean absolute error (MAE).

Therefore, we are sure that readers will be interested in this topic so that it will have implications for the increasing number of citations to this paper. We believe that this manuscript is appropriate for publication by The Civil

Engineering and Architecture Journal because its article is suitable with the Aim and Scope of The Civil Engineering and Architecture Journal especially in environmental engineering.

We have no conflicts of interest to disclose.

Please address all correspondence concerning this manuscript to me at doddyhekaardana@unr.ac.id
Thank you for your consideration of this manuscript.

Sincerely,
Putu Doddy Heka Ardana

Chloe Crawford <preview.hrpub@gmail.com>	Thu, Nov 25, 2021 at 10:07 AM
To: Doddy Heka Ardana <doddyhekaardana@unr.ac.id>
Cc: cea.editor@hrpub.org, editor <editor@hrpub.org>

Dear Putu Doddy Heka Ardana,

Thanks for your kind email.

We have received your paper. The outcome of the Initial Screening will be sent to you in one week.

Please feel free to reach out with any questions.

Best Regards

Chloe Crawford
Editorial Assistant
preview.hrpub@gmail.com
Horizon Research Publishing, USA
http://www.hrpub.org

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editor <editor@hrpub.org>	Thu, Nov 25, 2021 at 10:53 AM
To: Doddy Heka Ardana <doddyhekaardana@unr.ac.id>

Dear Putu Doddy HekaArdana,
Thanks for your interest in Civil Engineering and Architecture.
According to the abstract of the paper,the article is beyond the research scope of "Civil Engineering and Architecture ".
We appreciate your interest in the journal.

Best Regards

David Brown
Editorial Assistant
editor@hrpub.org
Horizon Research Publishing, USA
http://www.hrpub.org

---------- Original Message -----------
From: Doddy Heka Ardana <doddyhekaardana@unr.ac.id>
To: preview.hrpub@gmail.com, cea.editor@hrpub.org, editor@hrpub.org
Sent: Wed, 24 Nov 2021 13:44:03 +0800
Subject: Submit Manuscript

> *Civil Engineering and Architecture*
>
> *COVER LETTER*
>
> *Putu Doddy Heka Ardana Ngurah Rai University Civil Engineering Department,

> Ngurah Rai University,*
>
> *80238, Denpasar, Bali, Indonesia*
[Quoted text hidden]
> *Putu Doddy Heka Ardana*
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