

عنوان مقاله:

Suggested methods for prediction using semiparametric regression function

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خلاصه مقاله:

Ferritin is a key organizer of protected deregulation, particularly below risky hyperferritinemia, by straight immune-suppressive and pro-inflammatory things. We conclude that there is a significant association between levels of ferritin and the harshness of COVID-19. In this paper, we introduce a semi-parametric method for prediction by making a combination of NN and regression models. So, two methodologies are adopted, Neural Network (NN) and regression model in designing the model; the data was collected from a nursing home hospital for period ۱۱/۷/۲۰۲۱- ۲۳/۷/۲۰۲۱, the sample size is ۱۰۰ covid positive patients with ۱۲ females & ۳۸ males out of ۵۰, while ۲۶ female & ۲۴ male are non-COVID out of ۵۰. The input variables of the NN model are identified as the ferritin and a gender variable. The higher results precision is attained by the multilayer perceptron (MLP) networks when we applied the explanatory variables as the inputs with one hidden layer, which covers ۳ neurons, as the planned many hidden layers are with one output of the fitting NN model which is used in stages of training and validation beside the actual data. We used a portion of the actual data to verify the behavior of the developed models, we find out that only one observation is a false predictive value. This means that the estimation model has significant parameters to forecast the type of Covid cases ((Covid or no Covid

کلمات کلیدی:

Semi-parametric method, Neural Network models (NN), regression, Ferritin level, Covid ۱۹, multilayer perceptron ((MLP

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