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| **Title:** | Short-Term Electrical Load Forecasting Via Deep Learning Algorithms to Mitigate the Impact of Covid-19 Pandemic on Power Demand | | |
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| **Abstract:** |  |
| The COVID-19 situation has created an exceptional challenge in the power management system (PMS). This work mainly focuses on the load management through load forecasting. Power generation and distribution is the most important part of PMS. Accurate load forecasting can help to secure electricity scheduling, supply, and reduce the wastage of power. Right now, social distancing has created a great challenge to the administrators to run the power system efficiently and uninterruptedly with minimum involvement of human. In the sector of load management, it can be done through a proper and faster load forecasting approach. Electrical Load Forecasting through deep learning algorithm can perform an effective role in Power Management System (PMS). In this research real data is collected from West Zone Power Distribution Company Limited (WZPDCL) and meteorological data like temperature and humidity are collected from the website of Bangladesh Meteorological Department to train and forecast electrical load using MATLAB. Long-Short Term Memory (LSTM), Feed Forward Back Propagation (FFBP) and ELMAN Neural Network (NN) are used to forecast electrical load. As exogenous data, the load factor (L.F.), power factor (P.F.), current and temperature were used to train algorithms in forecasting the electrical load. A comparative analysis is shown to indicate which is the best suitable method for load forecasting of WZPDCL. Electrical load forecasting results are evaluated through Root Mean Square Error (RMSE). In this research for short-term electrical load forecasting, Feed Forward Back Propagation has shown a minimum RMSE value. | |