IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, April 2025
Impact Factor: 7.67

Prediction of Energy Consumption Using Machine Learning

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Abstract: *Energy consumption prediction is a critical task in today's world, where sustainable energy management and resource optimization are of paramount importance. This abstract presents a machine learning-based approach for accurately predicting energy consumption. By leveraging historical data and various predictive features, our model aims to provide accurate forecasts, enabling better energy resource allocation and efficient energy management. In this study, we employ a diverse dataset comprising information such as time of day, previous year energy consumption per day records (KW) and cost of energy consumption per day (INR). We explore the use of several machine learning algorithms, including linear regression, decision trees, random forests, and neural networks, to find the most suitable model for energy consumption prediction. The implementation of such predictive models can lead to better energy planning, cost savings, and reduced environmental impact. Through a data-driven approach, this project enhances energy management strategies for residential, commercial, and industrial applications*

Keywords: RNN, ThingSpeak, Dataset, IoT, LSTM

DOI: 10.48175/IJARSCT-25108