

## **Load Prediction using Deep Reinforced Learning**

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**Abstract**— The world is moving towards energy conservation every new day. However to conserve energy we should first manage and predict energy consumption. The ‘Artificial Intelligence’ world is constantly making its efforts to develop accurate load forecasting algorithms. Machine-learning algo’s can predict for load with great precision. Even companies like Amazon-AWS and Google-Azure has its own AI and ML tools to compliment load forecasting using its own cloud based resources. This paper proposes an approach to predict power consumption in a colony. The proposed method consists of five different layers, namely data retrieval, Data Cleaning, Data Filtering, Machine Learning & Forecasting and Assessment. We have used the deep reinforcement learning for predicting the energy consumption. In the assessment layer K-cross validation is used for validating the Deep Reinforcement learning. The prediction is validated using the 5 dissimilar trials namely: Misclassification Rate, Correctness, Completeness, and Effectiveness & Efficiency.

**Keywords**— Machine learning, Power consumption, load forecast, Deep Learning, A.I.