

Smart Energy Saving of 5G Base Station: Based on AI and other emerging technologies to forecast and optimize the management of 5G wireless network energy consumption

A literature review is presented on energy consumption and heat transfer in recent fifth-generation (5G) antennas in network base stations.

This project demonstrates the application of machine learning techniques in predicting energy consumption for 5G base stations. The results obtained from the XGBoost regression model indicate ...

To understand this, we need to look closer at the base station power consumption characteristics (Figure 3). The model shows that there is significant energy consumption in the base ...

In today's 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for both ...

BSs are one of the most power consuming elements of a 5G network. It is important to model their energy consumption for analyzing overall energy efficiency of a network. Additionally, the ...

The network power efficiency with the consideration of propagation environment and network constraints is investigated to identify the energy-efficient architecture for the 5G mobile ...

To address this, we propose a novel deep learning model for 5G base station energy consumption estimation based on a real-world dataset. Unlike existing methods, our approach integrates the Base ...

To further develop energy modelling methodology and attempt to answer the questions presented in the previous section, different machine learning algorithm's ability to predict energy consumption is ...

This project explores the application of machine learning and deep learning techniques to develop a predictive framework for forecasting power consumption, aiming to support energy providers in ...

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