BLINK SOLAR

Base station traffic data analysis

Overview

Can gcformer predict multi-base station traffic?

Current methods often fall short in effectively harnessing long-term trends and spatial interconnections among base stations. To bridge these gaps, this paper introduces the GCformer model, a novel approach that capitalizes on both spatial relationships and temporal patterns for multi-base station traffic prediction.

How can MSE and Mae be used to predict base station traffic?

MSE and MAE can be used as prediction accuracy indexes of base station traffic, and they can be used as evaluation indexes to balance the sensitivity of outliers and errors. In our prediction results, the smaller the result of the evaluation index, the better the prediction effect of the model.

When is the peak of traffic in a base station?

We can find that the periodic term information of the base station traffic volume data obtained by the Prophet method reaches the peak of traffic between noon and 8:30 pm. The traffic volume data is in a low valley from 3 am to 7 am.

How to predict 5G base station traffic volume?

Based on the above definitions, the 5G base station traffic volume prediction problem can be positioned as training a model using network topology G and feature matrix X of the temporal dimension data, and then calculating the traffic volume information of the base stations for the next m time instants, as shown in Eq. 1: (1) Y = F X, G

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Mobile Base Station Traffic Prediction Based on Traffic Data Analysis

A GRU recurrent neural network based mobile communication base station traffic prediction model and improvements is proposed, of great significance to the application of strategies ...

(PDF) Estimating Base Station Traffic and ...

This study explores the use of machine learning algorithms to predict traffic and downlink throughput at base stations based on hourly ...

Smart City Traffic Data Analysis and Prediction Based on ...

In order to solve this problem, a smart city traffic data analysis and prediction method based on weighted K-means clustering (K-means) is proposed. Taking Chengdu as an ...

Base station traffic prediction using XGBoostâ LSTM with ...

Abstract: With the development of information technology, base station traffic prediction is becoming more and more vital in allocating resource, and finally improving ...

Deep learning-based prediction of base station traffic

The mobile base station traffic data used in this paper from the actual data set in the game for simulation verification, collected a base station cell from Augto ...

Estimating Base Station Traffic and Throughput Using ...

This research focuses on analyzing and predicting traffic and throughput at base stations in cellular networks using machine learning algorithms. The main research area is ...

Model for Base Station Traffic Prediction Using the FECAM

Base stations are large power

consumers. Using AI models to accurately predict base station traffic not only helps information and communication infrastructure save energy ...

(PDF) Estimating Base Station Traffic and ...

Abstract and Figures This study explores the use of machine learning algorithms to predict traffic and downlink throughput at base ...

Long term 5G base station traffic prediction method based ...

Current methods often fall short in effectively harnessing long-term trends and spatial interconnections among base stations. To bridge these gaps, this paper introduces the ...

Mobile Base Station Traffic Prediction Based on Traffic ...

The base station traffic has non-stationary chaotic characteristics. In

addition to the traditional time series prediction method ARIMA model, scholars at home and abroad also ...

Traffic Behavior Analysis Using Mobile Base Station Data

Abstract. Most Koreans have mobile and their location information is col-lected based on location of the base station in one second increments. Mobile base stations are ...

Comparative Analysis of ARIMA, Prophet, and Glmnet for ...

Home Archives Vol. 8 No. 6 (2024): December Research Articles Comparative Analysis of ARIMA, Prophet, and Glmnet for Long Term Evolution (LTE) Base Station Traffic Forecasting

Traffic Prediction of Mobile Communication Base Station ...

Simultaneously, in the age of big data information, it is possible to obtain real-

time feedback of base station traffic data. By acquiring information about traffic changes in mobile ...

Betastack: Enhancing base station traffic prediction with ...

Extensive experiments on real-world data from base station cells in Guangdong, China demonstrate that BetaStack achieves significant performance improvements over both ...

Mobile Base Station Traffic Prediction Based on Traffic Data Analysis

The improved base station traffic prediction solution is of great significance to the application of strategies related to the dormant energy saving of base stations based on traffic prediction.

Base Station Traffic Prediction Using Wavelet Transform and ...

The base station traffic data can be

abstracted as time series with the characteristics of trend, periodicity, and randomness, which makes it suitable for predicting by ...

Mobile Base Station Traffic Prediction Based on Traffic ...

The base station traffic has non-stationary chaotic characteristics. In addition to the traditional time series prediction method ARIMA model, scholars at home and abroad also ...

Estimating Base Station Traffic and Throughput Using ...

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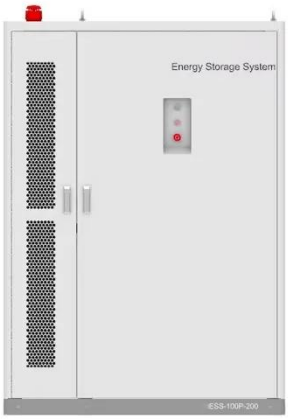

CNN-LSTM Base Station Traffic Prediction Based On Dual ...

Abstract Energy consumption in 5G base stations remains consistently high, even

during periods of low traffic loads, thereby resulting in unnecessary inefficiencies. To address ...

(PDF) Estimating Base Station Traffic and Throughput Using ...

Abstract and Figures This study explores the use of machine learning algorithms to predict traffic and downlink throughput at base stations based on hourly Key Performance ...

Traffic zone division based on big data from mobile phone base stations

This study demonstrates that useful traffic data can be obtained from mobile phones (movable sensors), and base stations (fixed sensors), offering new opportunities for in-depth ...

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