Innovations in Sustainable Technologies and Computing

Jyotsna Kumar Mandal
Mike Hinchey
Satyajit Chakrabarti *Editors*

Recent Advances in Artificial Intelligence and Smart Applications

Proceedings of RAAISA 2023

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Chapter 22
Design of IoT-Based Smart Energy Meter for E-Billing and Prepaid Electricity

Dola Sinha, Sushmita Bhrahmachary, Sovan Bhattacharya, Neha Chaudhuri, Soumyakanti Manna, and Chandan Bandyopadhyay

Abstract This study focuses on the utilization of an Internet of Things (IoT)-based smart energy meter for the purpose of wirelessly analyzing power usage in electrical systems. The objective is to alleviate the need for manual processing of electricity bills, enhance demand management, facilitate prepaid electricity supply, and reduce instances of power theft. With the escalating demand for electricity, the manual tracking and prevention of power theft pose significant challenges. The Internet of Things (IoT) is employed for the purpose of managing power consumption by

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