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CALL FOR BOOK CHAPTERS

Artificial Intelligence-empowered Modern Electric Vehicles in Smart Grid Systems

Book Editor

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Topics of Interest

Section-1: Introduction of AI and EVs in Smart Grid System
 Introduction to AI-empowered EVs in SG
• Communication Technologies for EVs
• Computational aspect of AI-empowered EVs
• Application area of AI-empowered EVs
Section-2: Energy Management for AI-empowered modern EVs
 Demand Response Management using AI-empowered EVs
• Energy Prediction for future energy supply
• Renewable Energy Harvesting for EV Charging Station
• Battery-operated Electric Vehicles and Plug-in Hybrids Electric Vehicles
Section-3: Energy Trading for AI-empowered modern EVs
 Peer-to-Peer Energy Trading using Renewable
• Energy Sources and EVs
• Smart Energy Management using Vehicle-to-Vehicle and Vehicle-to-Everything
• Vehicle-to-Vehicle power transfer
• Cyber Security Challenges for AI-empowered EVs
Section-4: Case Studies and futuristic trends for AI-enabled EVs
 Case Studies and Testbeds of AI-empowered EVs Systems
• The futuristic trends for modern EVs
• Conclusion

Scope of the Book

• Integration of Information and communication technologies (ICT) tools with traditional grid infrastructure has established the radial transformation worldwide as an intelligent grid, i.e., Smart Grid (SG) system. In SG, ICT has renovated the grid beyond voltage transmission and customer experience through Advanced Metering Infrastructure and Electric Vehicles (EVs). EVs' popularity is growing for several reasons, including price reductions, increased environmental and climate awareness. The advancements of EVs in terms of battery technology trends, charging techniques, best charging station selection, EVs battery health status check-ups, etc. could be achieved by using several disruptive technologies like Artificial Intelligence (AI), Internet of Things (IoT), and Big Data analytics (BDA). AI is the upper umbrella, which comprises Machine Learning (ML), Deep Learning (DL), Reinforcement Learning (RL), Natural Language Processing (NLP), and many more. Next, IoT integrated AI-empowered analytics can also be a magnificent tool to detect and prevent cyber-attacks on the EVs system and prevent it.
• This book is the first-ever "how-to" guide addressing one of the most overlooked practical, methodological, and moral questions in any nations' journeys to maintain Privacy and Security in the energy sector: How reliable and real-time remote monitoring can be achieved? How energy and EV systems can optimize their infrastructure and workflows to make the most of AI promising use cases? Explore most promising aspects of AI for EV industries? How AI can help EVs and smart grid systems do better? What should we do if we think my information has been compromised? It differs from other published books as it includes a detailed framework to maintain security and privacy in AI-enabled EV services using Blockchain Technologies, and comparative case studies with respect to various performance evaluation metrics, such as privacy preservation, V2G, Peer-to-peer charging, scalability, and legislation. This edited book will cover the current state-of-the-art of AI-enabled EVs applications. The chapters will cover a broad range of latest tools and techniques required to process the ever-evolved data generated in EV sector.

For further inquiry, you can contact:

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Refer website for more information about the book.
https://sites.google.com/view/ai-electric-vehicle/home

Important Dates

Abstract with title keywords and author detail:	June 30, 2023
Preliminary acceptance/rejection notification	:July 10, 2023
Full chapter Submission	:July 25, 2023
First review notification	: August 05, 2023
Revised chapter submission	: August 20, 2023
Final Acceptance/Rejection notification	:August 30, 2023
Camera Ready submission	:Sept 15, 2023
Book Publication (Tentative) :	Sept-Oct 2023

Submission Procedure

Please submit your one-page write up (with abstract of 300- 500 words and 6 keywords) of your chapter along with tentative Table of Contents through Online Submission System (ONLY). Easy Chair Submission Link https://easychair.org/conferences/?conf=elsevierbca5ghealthc on or before 15th June 2023 . Upon acceptance of the proposal, further instructions for submission guidelines according to the Elsevier will be communicated.

Reasons to contribute in this edited book

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