AI, Edge and IoT-based smart agriculture /

Abraham, Ajith

Academic Press,
[2022]

Libros electrónicos

Recurso Electrónico

AI, Edge, and IoT Smart Agriculture integrates applications of IoT, edge computing, and data analytics for sustainable agricultural development and introduces Edge of Thing-based data analytics and IoT for predictability of crop, soil, and plant disease occurrence for improved sustainability and increased profitability. The book also addresses precision irrigation, precision horticulture, greenhouse IoT, livestock monitoring, IoT ecosystem for agriculture, mobile robot for precision agriculture, energy monitoring, storage management, and smart farming. The book provides an overarching focus on sustainable environment and sustainable economic development through smart and e-agriculture. Providing a medium for the exchange of expertise and inspiration, contributions from both smart agriculture and data mining researchers around the world provide foundational insights. The book provides practical application opportunities for the resolution of real-world problems, including contributions from the data mining, data analytics, Edge of Things, and cloud research communities working in the farming production sector. The book offers broad coverage of the concepts, themes, and instruments of this important and evolving area of IOT-based agriculture, Edge of Things and cloud-based farming, Greenhouse IOT, mobile agriculture, sustainable agriculture, and big data analytics in agriculture toward smart farming.

Título: AI, Edge and IoT-based smart agriculture edited by Ajith Abraham [and more].

Editorial: London Academic Press [2022]

Descripción física: 1 online resource (xvii, 459 pages)

Mención de serie: Intelligent data centric systems

Bibliografía: Includes bibliographical references.

system S. Premkumar and A.N. Sigappi. -- Precision agriculture : weather forecasting for future farming Kingsley Eghonghon Ukhurebor, Charles Oluwaseun Adetunji, Daniel Ingo Hefft et al. II.) IoT use cases in smart farming and smart agriculture: Crop management system using IoT Himadri Nath Saha, Reek Roy, Chiranmay Sarkar et al. -- Smart irrigation and crop security in agriculture using IoT Sugamya Katta, Sangita Ramatenki and Harika Sammeta. -- The Internet of Things in agriculture for sustainable rural development Ashish Tripathi, Arush Jain, Prem Chand Vashist et al. -- Internet of Things (IoT) in agriculture toward urban greening Sarita Samal, Biswaranjan Acharya and Prasanta Kumar Barik. -- Smart e-agriculture monitoring systems Sohail Saif, Priya Roy, Ujjwal Maulik et al. -- Smart agriculture using renewable energy and AI-powered IoT Moxa Doshi and Akson Varghese. -- Smart irrigation-based behavioral study of Moringa plant for growth monitoring in subtropical desert climate condition Vinod Kumar Shukla, Reshmi S. Nair and Farjad Khan. -- Surveying smart farming for smart cities Jorge A. Ruiz-Vanoye, Ricardo A. Barrera- Cmara, Israel Campero-Jurado et al. III.) Edge computing use cases in smart farming and smart agriculture: Farm automation K. Rupabanta Singh, Sujata Dash and Sourav K. Giri. -- A fog computing-based IoT framework for prediction of crop disease using big data analytics Chandrima Roy, Nivedita Das, Manjusha Pandey et al. -- Agribots : a gateway to the next revolution in agriculture Charles Oluwaseun Adetunji, Daniel Ingo Hefft and Olaniyan T. Olugbemi. IV.) Sensor network use cases in smart farming and smart agriculture: SAW : a real-time surveillance system at an agricultural warehouse using IoT Samaleswari Prasad Nayak, Satyananda Champati Rai and Biswajit Sahoo. -- The predictive model to maintain pH levels in hydroponic systems Jyotiprakash Panigrahi, Priyanka Pattnaik, Satya Ranjan Dash et al. -- A crop-monitoring system using wireless sensor networking Himadri Nath Saha, Reek Roy, Chiranmay Sarkar et al. -- Integration of RFID and sensors in agriculture using IoT Himadri Nath Saha, Sumanta Chakraborty and Reek Roy. V.) AI and data analytics in agriculture: Prediction of crop yield and pest-disease infestation Pramit Pandit, K.N. Krishnamurthy and Bishvajit Bakshi. -- Machine learning-based remote monitoring and predictive analytics system for crop and livestock Nikita Goel, Sumit Kaur and Yogesh Kumar. -- Exploring performance and predictive analytics of agriculture data Madhavi Vaidya and Shweta Katkar. -- Climate condition monitoring and automated systems Kingsley Eghonghon Ukhurebor, Charles Oluwaseun Adetunji, ... Daniel Ingo Hefft. -- Decision-making system for crop selection based on soil Jitendra Singh, Preeti Pandey and P.K. Pandey. -- Cyberespionage : socioeconomic implications on sustainable food security Charles Oluwaseun Adetunji, Olaniyan T. Olugbemi, Kingsley Eghonghon Ukhurebor et al. -- Internet of Things on sustainable aquaculture system Jorge A. Ruiz-Vanoye, Ricardo A. Barrera- Cmara, Yadira Toledo-Navarro et al. -- IoT-based monitoring system for freshwater fish farming : analysis and design Osikemekha Anthony Anani, Charles Oluwaseun Adetunji, Akinola Samson Olayinka et al. -- Transforming IoT in aquaculture : a cloud solution Shavika Gupta, Abhishek Gupta and Yasha Hasija. -- Toward the design of an intelligent system for enhancing salt water shrimp production using fuzzy logic Charles Oluwaseun Adetunji, Osikemekha Anthony Anani, Akinola Samson Olayinka et al.

Restricciones de acceso: Acceso restringido a miembros de grupos de investigación, alumnos de doctorado y máster UMU. Es necesario autenticarse previamente en accesorevistas.um.es.

Detalles del sistema: Modo de acceso: Internet

ISBN: 9780128236956 0128236957 9780128236949 0128236949

Materia: Agricultural informatics Agricultural innovations Artificial intelligence- Agricultural applications Edge computing Internet of things Agriculture- Data processing Agriculture- Informatique Agriculture- Innovations Intelligence artificielle- Applications agricoles Internet des objets Agriculture- Data processing Agricultural informatics Agricultural innovations Artificial intelligence- Agricultural applications Edge computing Internet of things

Autores: Abraham, Ajith

Enlace a formato físico adicional: Print version AI, Edge and IoT-based smart agriculture. London : Academic Press, [2022] 0128236949 9780128236949 (OCoLC)1204135864

Punto acceso adicional serie-Título: Intelligent data centric systems.

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es