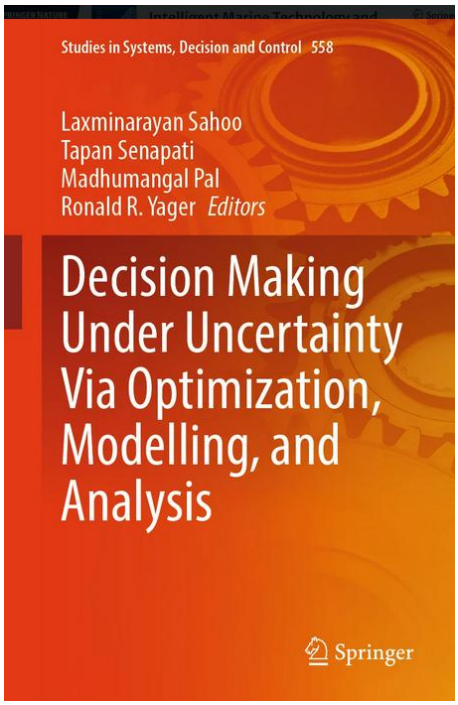


Bibliographic Information

Book Title
Decision Making Under Uncertainty Via Optimization, Modelling, and Analysis

Editors
Laxminarayan Sahoo, Tapan Senapati, Madhumangal Pal, Ronald R. Yager

Series Title
Studies in Systems, Decision and Control

DOI
https://doi.org/10.1007/978-981-96-0085-4

Publisher
Springer Singapore

eBook Packages
Intelligent Technologies and Robotics, Intelligent Technologies and Robotics (R0)

Hardcover ISBN
978-981-96-0084-7
Published: 03 March 2025

Softcover ISBN
978-981-96-0087-8
Due: 17 March 2026

eBook ISBN
978-981-96-0085-4
Published: 02 March 2025

Series ISSN
2198-4182

Series E-ISSN
2198-4190

Edition Number
1

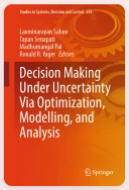
Number of Pages
XXVII, 616

Number of Illustrations
27 b/w illustrations, 79 illustrations in colour

On the Maintenance Oversight of the Healthcare Sector Based on Artificial Intelligence

Chapter | First Online: 03 March 2025

pp 395–425 | Cite this chapter



Decision Making Under Uncertainty Via Optimization, Modelling, and Analysis

Sovan Bhattacharya, Dola Sinha, Chandan Bandyopadhyay, Saibal Majumder & Arindam Biswas

Part of the book series: Studies in Systems, Decision and Control ((SSDC,volume 558))

Abstract

Cite this chapter

Bhattacharya, S., Sinha, D., Bandyopadhyay, C., Majumder, S., Biswas, A. (2025). On the Maintenance Oversight of the Healthcare Sector Based on Artificial Intelligence. In: Sahoo, L., Senapati, T., Pal, M., Yager, R.R. (eds) Decision Making Under Uncertainty Via Optimization, Modelling, and Analysis. Studies in Systems, Decision and Control, vol 558. Springer, Singapore. https://doi.org/10.1007/978-981-96-0085-4_21

DOI
https://doi.org/10.1007/978-981-96-0085-4_21

Published
03 March 2025

Publisher Name
Springer, Singapore

Print ISBN
978-981-96-0084-7

Online ISBN
978-981-96-0085-4

eBook Packages
Intelligent Technologies and Robotics
Intelligent Technologies and Robotics (R0)

Publish with us

Table of contents (32 chapters)

On the Maintenance Oversight of the Healthcare Sector Based on Artificial Intelligence

Sovan Bhattacharya, Dola Sinha, Chandan Bandyopadhyay, Saibal Majumder, and Arindam Biswas

Abstract A new way of thinking about health care has emerged thanks to the use of artificial intelligence (AI). In this review paper, we identify five primary applications of artificial intelligence (AI) in health care by reviewing the relevant literature. The applications are as follows: (1) patient digital care, (2) pharmaceutical and clinical research, (3) patient involvement and compliance, (4) rehabilitation, and (5) additional administrative tasks. Artificial intelligence (AI) may have several advantages for the medical sector. Among its many capabilities are EHR management, new vaccination and therapy discovery, medical prescription error detection, data storage and analysis, and technology-assisted rehabilitation. It might also motivate patients to engage fully in their treatment and adhere to the recommended schedules. It may help to manage the 2019 coronavirus disease (COVID-19) epidemic by early detection, reduce the administrative load placed on those working in the healthcare sector, and identify clinical challenges in imaging and diagnostic services. All the same,

S. Bhattacharya · C. Bandyopadhyay · S. Majumder
Department of Computer Science and Engineering (Data Science), Dr. B. C. Roy Engineering College, Durgapur, India
e-mail: sovan.cse@gmail.com

C. Bandyopadhyay
e-mail: chandanb.iiest@gmail.com

S. Majumder
e-mail: saibal.majumder.1729@gmail.com

D. Sinha
Department of Electrical Engineering, Dr. B.C. Roy Engineering College, Durgapur, India
e-mail: dola.sinha@bcrec.ac.in

C. Bandyopadhyay
Department of Computer Science and Engineering, University of Bremen, Bremen, Germany

A. Biswas (✉)
Center for IOT, AI Integration with Education-Industry-Agriculture, Kazi Nazrul University, Asansol, India
e-mail: mailarindambiswas@yahoo.co.in

School of Mines and Metallurgy, Kazi Nazrul University, Asansol, India

L. Sahoo et al. (eds.), *Decision Making Under Uncertainty Via Optimization, Modelling, and Analysis*, Studies in Systems, Decision and Control 558,
https://doi.org/10.1007/978-981-96-0085-4_21