

Data Driven Mathematical Modeling in Agriculture

Tools and Technologies

Editors:

Sabyasachi Pramanik, Haldia Institute of Technology, India

Sandip Roy, Brainware University, Kolkata, India

Rajesh Bose, Brainware University, Kolkata, India

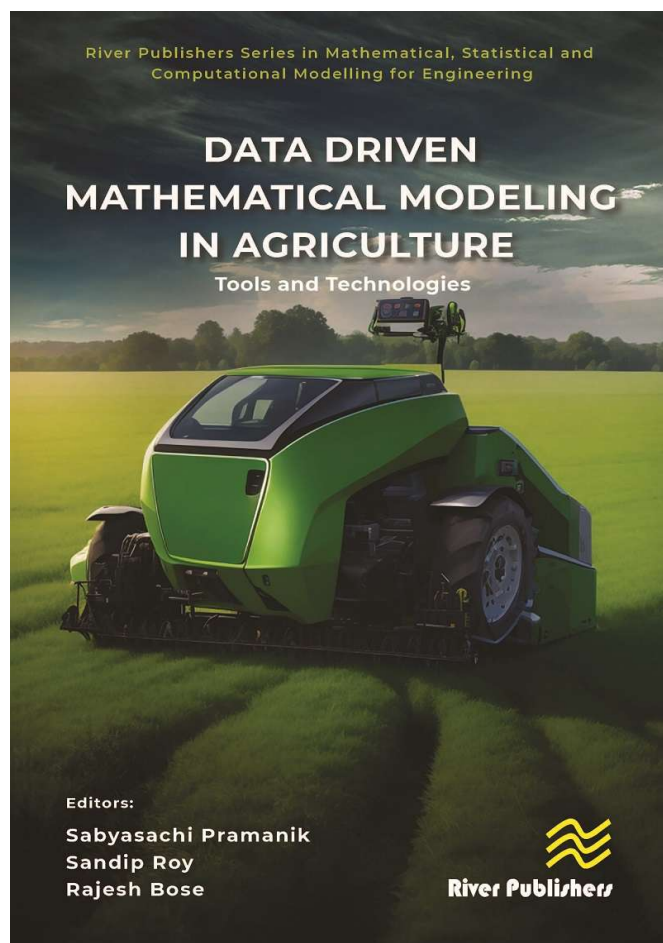
The research in this book looks at the likelihood and level of use of implemented technological components with regard to the adoption of different precision agricultural technologies. To identify the variables affecting farmers' choices to embrace more precise technology, zero-inflated Poisson and negative binomial count data regression models are utilized. Outcomes from the count data analysis of a random sample of various farm operators show that various aspects, including farm dimension, farmer demographics, soil texture, urban impacts, farmer position of liabilities, and position of the farm in a state, were significantly associated with the approval severity and likelihood of precision farming technologies.

Technical topics discussed in the book include:

- Precision agriculture
- Machine learning
- Wireless sensor networks
- IoT
- Deep learning.

TABLE OF CONTENTS

1. Use of CNNs and their Frameworks for the Detection of Fungal Herb Disease
2. Technologies based on the IoT and Artificial and Natural Intelligence for Sustainable Agriculture
3. IoT for Smart Farming Technology: Practices, Methods and Future
4. Integrating Artificial Intelligence into Pest Management
5. Practices of Deep Learning in Farming: What Deep Learning Can Do in Intelligent Agriculture
6. Building a Solar-powered Greenhouse Having SMS and a Web Information Framework
7. Agriculture using Digital Technologies
8. Agriculture Digitization: Perspectives on the Networked World
9. Cucumber in PH Disease Monitoring Using an IoT-Based Mobile App
10. New Technologies for Sustainable Agriculture
11. Agriculture Automation
12. Food 4.0: A Survey
13. Crop Monitoring in Real Time in Agriculture
14. Smart Farming Utilizing Wireless Sensor Network and Internet of Things
15. Intelligent Agriculture Using Autonomous UAVs
16. Agriculture using Smart Sensors
17. Technologies that Work Together for Precision Agriculture
18. Utilizing Smart Farming Methods to Reduce Water Scarcity
19. Real-time Irrigation Optimization for Horticulture Crops Using WSN, APSim, and Communication Models
20. Greenhouse Gas Discharges from Farming Modeled Mathematically for Various End Users



Editors:

Sabyasachi Pramanik

Sandip Roy

Rajesh Bose



River Publishers Series in Mathematical, Statistical and Computational Modelling for Engineering

ISBN: 9788770041003

e-ISBN: 9788770040990

Available From: June 2024

Price: € 121.00 \$ 143.00

KEYWORDS:

Data Analysis for Pesticide Control, Flood Prediction in Smart Farming, Soil Monitoring Tools in Agriculture, Video Surveillance in Smart Agriculture,



www.riverpublishers.com
marketing@riverpublishers.com