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Nota di contenuto	Chapter 1. Remote Sensing and Artificial Intelligence for Urban Environmental Studies -- Chapter 2. A Systematic Review on the Application of Geospatial Technology and Artificial Intelligence in Urban Growth Modeling -- Chapter 3. Urban Expansion Monitoring Using Machine Learning Algorithms on Google Earth Engine Platform and Cellular Automata Model: A Case Study of Raiganj Municipality, West Bengal, India -- Chapter 4. Multi-Temporal Dynamics of Land Use Land Cover Change and Urban Expansion in the Tropical Coastal District of Kozhikode -- Chapter 5. Land Use Land Cover Change Modeling and Forecasting in Mumbai City by Integrating Cellular Automata and

Artificial Neural Network -- Chapter 6. Monitoring Urban Sprawl Using Geo-Spatial Technology: A Case Study of Kanpur City, India -- Chapter 7. Studying Urban Growth Dynamics in Indo–Gangetic Plain -- Chapter 8. Monitoring and Prediction of Spatiotemporal Land Use Land Cover Change Using Markov Chain Cellular Automata Model in Barisal, Bangladesh -- Chapter 9. Urban Change Detection Analysis Using Big Data and Machine Learning: A Review -- Chapter 10. Urban Green and Blue Spaces Dynamics – A Geospatial Analysis using Remote Sensing, Machine Learning and Landscape Metrics in Rajshahi Metropolitan City, Bangladesh -- Chapter 11. Quantifying the Impact of Urban Greenspace Pattern to Land Surface Temperature: Evidence from an Urban Agglomeration of Eastern India -- Chapter 12. Urban Effects on Hydrological Status and Trophic State in Peri-Urban Wetland -- Chapter 13. Integrated Urban Decarbonization Planning Tool for Global Cities -- Chapter 14. Perception of Ecosystem Services from Urban Green Space: A Case from An Urban and A Peri-Urban Green Space in English Bazar Urban Agglomeration, Eastern India -- Chapter 15. Monitoring Spatio-Temporal Reduction of An Urban Wetland Using Landsat Time Series Analysis: A Case Study of Deepor Beel, Assam, India -- Chapter 16. GIS-Based Methodology and World Urban Database and Access Portal Tools (WUDAPT) For Mapping Local Climatic Zones: A Study of Kolkata -- Chapter 17. Air pollutants-induced environmental critical zones in capital city of India -- Chapter 18. Nexus Between Anthropogenic Heat Flux and Urban Heat Island -- Chapter 19. Impact of Urbanisation on Land Use Land Cover Change and Land Surface Temperature in a Satellite Town -- Chapter 20. Identifying the Flood Hazard Zones in Urban Area Using Flood Hazard Index (FHI) – A Case of Capital City of India -- Chapter 21. An Assessment of Traffic Noise Level in Agartala Municipal Corporation Using Geo-Spatial Technology in Tripura, India -- Chapter 22. Solid Waste Management Scenario of Raiganj Municipality, West Bengal, India -- Chapter 23. Integration of Advanced Technologies in Urban Waste Management -- Chapter 24. Rethinking the Urban Form and Quality of Walking Experience Using Geospatial Technology -- Chapter 25. A Remote Sensing and GIS Based Approach for Assessment of Drinking Water Quality and Its Association with Land-Use Land-Cover in Azamgarh City, India -- Chapter 26. Urban Planning in Perspective of UN Sustainable Development Goal – 11 Using Geospatial Technology: A Case Study of Kolkata Megapolis (India) -- Chapter 27. An Introduction to Big Data and its Possible Utility in the Urban Context -- Chapter 28. Rethinking Progress in Approaches and Techniques for the Urban Environmental Studies.

Sommario/riassunto

According to UN estimates, approximately nearly half of the world's population now lives in cities and that figure is expected to rise to almost 70% by 2050. Cities now account for around 70% of worldwide greenhouse gas emissions, and this percentage is predicted to rise in the near future as a result of projected increases in global urbanization patterns. It is widely acknowledged that irrational urban planning and design can increase emissions while also exacerbating threats and risks, resulting in a slew of environmental issues such as urban heat islands, air pollution, flooding, amongst other issues, as well as environmental, social, and economic losses. Therefore, these concerns must be addressed promptly in order to cope up with these rising difficulties and make urban environments safer for residents. With the advancement of remote sensing technology and the use of current remote observation systems, urban data science, remote sensing, and artificial intelligence (AI), modeling and quantifying emergent difficulties in urban regions and urban systems have become easy. They aid in the quantitative analysis of urban shape, functions, and

human behavior in cities. Harvesting data, developing models, and suggesting new methodologies will be aided by combining urban ecology with new breakthroughs in data science. This book is of great value to a diverse group of academicians, scientists, students, environmentalists, meteorologists, urban planners, remote sensing and GIS experts with a common interest in geospatial sciences within the earth environmental sciences, as well as human and social sciences.