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   Nota di contenuto Chapter 1 An Introduction to Artificial Intelligence and its Applications
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                      -- Chapter 4 Application of geospatial technologies and AHP technique
                      in the identification of soil erosion-prone zones in the Rift Valley,
                      Southern Ethiopia -- Chapter 5 Shoreline changes along Bhitarkanika
                      Sanctuary, North Odisha coast, India -- Chapter 6 One-dimensional
                      shoreline evolution modeling at sea turtle nesting ground near

Rushikulya estuary, Southern Odisha coast, India -- Chapter 7 Analysis of sea surface temperature and Chlorophyll-a concentration along the coastline of the Indian peninsula using remote sensing data -- Chapter 8 Landslide Susceptibility Mapping through Hyperparameter Optimized Bagging and Boosting Ensembles -- Chapter 9 Flash Floods Assessment in Hill Region -- Chapter 10 Mapping Flood Hazard in Marinduque, Philippines using Maximum Entropy Approach -- Chapter 11 GIS mapping and Groundwater Quality Assessment near solid waste dump site -- Chapter 12 Assessment of Groundwater Potential using an Integrated approach of GIS, Fuzzy AHP and Remote Sensing: A case study of Madurai City in India -- Chapter 13 Developing Sustainable Livelihood Index for the Coastal Belt of Indian Sunderbans -- Chapter 14 A Geo-Spatial approach for the development of sustainable watershed management -- Chapter 15 An Efficient Image Compression Algorithm using Neural Networks -- Chapter 16 Computer Vision based Autonomous Underwater Vehicle with Robotic Arm for Garbage Detection and Cleaning -- Chapter 17 Visual Media Super-Resolution Using Super Resolution Generative Adversarial Networks.

| Sommario/riassunto | This edited collection provides a comprehensive exploration of cutting-edge ideas, approaches, simulations, evaluations of risk, and systems that enhance the practicality of current geospatial technologies for reducing hazard risks. The various sections within this book delve into subjects such as the foundational principles of Earth Observation Systems (EOS) and geospatial methodologies. Additionally, the text serves as an advisory resource on the collaborative use of satellite-derived data and artificial intelligence to track and alleviate geo-environmental threats. The volume imparts extensive understanding regarding geo-environmental dangers and their analysis via EOS along with geospatial strategies. It encompasses key hazard-related themes including coastal degradation, predisposition to landslides, mapping vegetation coverages, tropical storm patterns, soil depletion due to erosion processes, vulnerability to rapid or extended flooding events, variations in ocean surface temperatures alongside chlorophyll-a levels; it also addresses assessments related to groundwater reserves and quality measures as well as sustainable management practices for watersheds that support community livelihoods—all through leveraging AI-integrated geospatial tools in conjunction with earth observation technologies. Furthermore, this work engages in discourse about systems designed for mitigating these ecological challenges sustainably. Scholars engaged in research activities; educational professionals; those involved in landscape design; engineers working at ground level; individuals responsible for policy-making—all who are concerned with geo-environmental hazards or associated domains—will find valuable insights within these pages. . |