1. Record Nr. UNINA9911049202403321

Autore	Sultanow Eldar
Titolo	AI for Climate Action and Sustainable Development : People over Pixels, Planet over Profit / / by Eldar Sultanow, Marcus Grum, Mckinley Black
Pubbl/distr/stampa	Berkeley, CA : , : Apress : , : Imprint : Apress, , 2025
ISBN	979-88-6882-046-5
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (315 pages)
Collana	Professional and Applied Computing Series
Altri autori (Persone)	GrumMarcus BlackMckinley
Disciplina	338.9/27
Soggetti	Artificial intelligence Bioclimatology Sustainability Ecology Artificial Intelligence Climate Change Ecology Environmental Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I Agenda 2030 -- Chapter 1: 17 UN Sustainable Development Goals -- Part II Earth -- Chapter 2: Scarcity of Resources -- Chapter 3: Decrease in Green Spaces -- Chapter 4: Deforestation Monitoring in Siberia -- Chapter 5: Efficient Fertilizer Production Using Quantum Computing -- Chapter 6: Digital Farming -- Chapter 7: Degradation of Biodiversity -- Chapter 8: Waste Disposal -- Chapter 9: Ensuring Equitable Access and Secure Distribution of Aid for Children -- Chapter 10: Smart Cities and Urban Development -- Chapter 11: AI-Driven Traffic Management -- Chapter 12: Healthcare: Challenges, Innovations, and Ethical Considerations -- Chapter 13: OPAL: An Innovative Tool for Environmentally Conscious Development -- Chapter 14: Combating Plastic Pollution in Ghana -- Part III Air -- Chapter 15: Air Pollution -- Chapter 16: From Birds to Bees: Safeguarding Earth's Aviators -- Chapter 17: - Weather and Atmospheric Forecasting -- Chapter 18: - Smart Skies: AI-Driven Solutions for Airspace Management -- Chapter 19: - Cloud Computing -- Part IV – Water --

Chapter 20: Species Conservation -- Chapter 21: Wastewater Treatment -- Chapter 22: Tracking Turtle Migration -- Chapter 23: Sperm Whale Tracking -- Chapter 24: – Seawater Desalination -- Chapter 25: Intelligent Filtration Technology -- Chapter 26: Efficient Catalysts for Hydrogen Production and Reducing Coal Usage -- Part V – Fire -- Chapter 27: Next Generation Nuclear Power -- Chapter 28: Wildfires and Lightning Strikes -- Chapter 29: Volcanic Predictions.

Sommario/riassunto

Explore how AI can be harnessed responsibly to create a sustainable future, guided by the United Nations' 17 Sustainable Development Goals (SDGs). This book emphasizes the collective power of individual and institutional actions to foster equity, resilience, and sustainability in a digital age. Structured into five comprehensive sections, you'll see how ethical AI is applied for equity, sustainability, and social responsibility in tackling global challenges effectively. Part 1: Agenda 2030 introduces the SDGs, providing a framework for understanding interconnected global challenges and the role of AI in accelerating progress. Part 2: Earth delves into AI applications for managing resources, monitoring ecosystems, conserving biodiversity, and addressing urban challenges like waste management and traffic systems. Part 3: Air highlights AI's role in water conservation, species tracking, and advanced technologies for filtration and desalination. Part 4: Water examines innovations in energy generation, wildfire management, and assessing AI's carbon footprint. Part 5: Fire focuses on air quality, meteorology, and AI applications in aviation and population management. AI for Climate Action and Sustainable Development offers actionable insights for researchers, policymakers, and technologists, inspiring readers to balance innovation with responsibility, and building a just, inclusive, and sustainable future for all. What You Will Learn Understand sustainability as a fundamental pillar of progress in the modern world. Review the ethical responsibilities that guide technological advancements. Gain insights into shaping a humane and inclusive digital future. Examine the dual impact of innovation—its opportunities and challenges.