

# AI Applications for Business, Medical, and Agricultural Sustainability

Part of the Advances in Computational Intelligence and Robotics Book Series

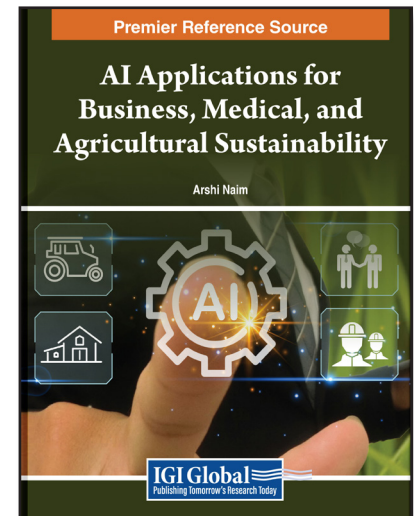
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## Description:

Climate change, natural resource depletion, and unsustainable agricultural practices pose unprecedented challenges to our planet. The increasing environmental footprint of computer networks, communication systems, and other IT infrastructures exacerbates these issues, contributing significantly to energy consumption and greenhouse gas emissions. Without innovative solutions, these challenges will continue to escalate, threatening the sustainability of our planet for future generations.

**AI Applications for Business, Medical, and Agricultural Sustainability** offers a comprehensive solution by harnessing the power of Artificial Intelligence (AI) and High-Performance Computing (HPC). This book showcases how AI's ability to process vast amounts of data and HPC's capability to perform massive computations in short periods can revolutionize climate modeling, energy optimization, and sustainable agriculture. By introducing new energy models, algorithms, and methodologies, the book provides a roadmap for developing next-generation computing and communication infrastructures that are environmentally sustainable.

This book is ideal for educators, environmentalists, industry professionals, researchers, and academics. It explores the potential of AI and HPC in addressing environmental challenges and delves into the ethics and policies surrounding their use. By offering practical insights and innovative solutions, **AI Applications for Business, Medical, and Agricultural Sustainability** empowers readers to make a difference in mitigating climate change, preserving natural resources, and promoting sustainable agriculture.



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## Topics Covered:

- AI Challenges in Environmental Preservation
- AI Ethics for Environmental Development
- AI for Climate Change Solutions
- AI for Sustainable Development Policies
- AI in Modeling and Simulation
- AI's Unintended Consequences for Earth
- Climate Science for Climate Neutrality
- Collaborative HPC and AI Environments
- Efficient and Sustainable Energy Use
- Energy Optimization in Smart Grids
- Environmental Sustainability in Computing
- Future Trends in Computing Resource Management
- Global Warming and Data Center Power Consumption

**Subject:** Computer Science & Information Science

**Classification:** Edited Reference

**Readership Level:** Advanced-Academic Level  
(Research Recommended)

**Research Suitable for:** Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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