AI for Environmental Sustainability

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Abstract: *This paper explores the transformative role of Artificial Intelligence (AI) in achieving environmental sustainability across diverse sectors such as energy, water, biodiversity, and transportation. It reviews state- of-the-art AI applications including machine learning, neural networks, computer vision, expert systems, and robotics for predictive environmental modeling, waste and pollution control, smart energy grids, and conservation monitoring. The paper addresses the critical environmental challenges of the 21st century and how AI can enable smart, adaptive, and sustainable ecosystems through data-driven decision-making. Challenges, ethical concerns, and future research directions are also discussed.*

Keywords: Artificial Intelligence

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