

Enhancing Building Performance Simulation Through Artificial Intelligence

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Abstract : Building Performance Simulation plays a crucial role in optimizing energy efficiency, comfort, and sustainability in buildings. This paper explores the integration of Artificial Intelligence techniques into Building Performance Simulation to enhance accuracy, efficiency, and adaptability. The synthesis of Artificial Intelligence and Building Performance Simulation offers promising avenues for addressing complex building dynamics, optimizing energy consumption, and improving occupants' comfort. This paper examines various Artificial Intelligence methodologies and their applications in Building Performance Simulation, highlighting their potential benefits and challenges. Through a comprehensive review of existing literature and case studies, this paper presents insights into the current state, future directions, and implications of Artificial Intelligence driven Building Performance Simulation on the built environment

Keywords : artificial intelligence, building performance, energy efficiency, building performance simulation, buildings sustainability, built environment.

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