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(57) Abstract :
The invention relates to a system and method for decision-making in IoT-enabled environments by deploying advanced processing capabilities and machine learning algorithms at the network periphery. This distributed architecture empowers edge devices to autonomously analyze incoming data streams, extract actionable insights, and make informed decisions in real-time, thereby overcoming the limitations of traditional cloud-centric approaches. With its ability to minimize latency, conserve bandwidth, and enhance scalability, the system facilitates dynamic decision-making across diverse IoT applications, including smart cities, industrial automation, healthcare, transportation, and agriculture. By seamlessly integrating edge computing capabilities into existing IoT ecosystems, the invention lays the groundwork for a new era of intelligent, autonomous, and resilient IoT solutions capable of meeting the evolving demands of today's interconnected world.