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(57) Abstract :
The invention introduces a hybrid quantum-classical computing framework to optimize IoT applications in smart cities, addressing the computational challenges of real-time data processing. This system leverages quantum algorithms for complex tasks such as optimization, machine learning, and predictive analytics while employing classical computing for routine operations. Applications include traffic flow optimization, energy management, environmental monitoring, and IoT device security enhancement. By seamlessly integrating into existing IoT infrastructures, the system ensures scalability, adaptability, and cost-effectiveness. The hybrid approach also incorporates advanced quantum cryptography for secure communications, providing robust protection against cyber threats. With a user-friendly design, the invention democratizes access to quantum computing technologies, enabling widespread adoption. This transformative system enhances urban efficiency, sustainability, and resilience, paving the way for smarter, safer, and more livable cities.

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