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(57) Abstract :
The invention discloses an edge computing framework for low-latency smart city applications, comprising IoT devices (101), local edge nodes (102), regional edge servers (103), cloud integration (104), and application layer (105). The framework reduces latency, conserves bandwidth, and ensures resilience by distributing computational intelligence across hierarchical edge layers. The system integrates AI-powered scheduling, adaptive data filtering, and secure communication to support diverse services such as traffic monitoring, healthcare, and energy management. This invention offers a scalable, reliable, and secure solution for next-generation smart city infrastructures.

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