

Smarter City

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Product Description

Smarter City

The concept of the Smarter City represents the future of urban living—a paradigm where technology, data, and interconnected infrastructure converge to enhance sustainability, efficiency, and the quality of life for citizens.

Smarter City provides an essential roadmap for understanding this complex evolution. It begins by laying the foundational pillars, exploring the convergence of IoT (Internet of Things), Cloud Computing, and Big Data as the technological engine of urban transformation. The book moves beyond theory to detail practical, real-world use cases, such as Connected Street Lighting that improves energy efficiency, Smart Traffic Control that dynamically reduces congestion, and Connected Environmental Monitoring systems that track air and water quality in real time.

This text is vital for urban planners, engineers, policymakers, and technologists seeking to grasp the architecture, implementation, and long-term impact of smart city initiatives. It is the definitive guide to building a truly intelligent, resilient, and sustainable urban future.

Salient Features:

- **Foundational Technology**: Deep dive into the core technologies enabling smart cities: IoT (Internet of Things), Cloud Computing, and Big Data Analytics.
- **Key Pillars of Smart Cities**: Comprehensive coverage of the main components, including Smart Governance, Smart Economy, Smart Mobility, Smart Environment, Smart People, and Smart Living.
- **IoT Architecture and Sensors**: Detailed explanation of the IoT architectural layers (Perception, Network, Application) and the role of various sensors (temperature,

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humidity, air quality) in data collection.

- **Practical Use Cases**: Real-world examples of successful smart city deployment, including:

1. Connected Street Lighting for energy saving and remote monitoring.
2. Smart Traffic Control for dynamic signal adjustment and congestion reduction.
3. Connected Environmental Monitoring for air quality tracking and pollution detection.

- **Cloud and Data Integration**: Analysis of how Cloud Platforms provide the necessary infrastructure for scalable data storage and how Big Data Analytics translates raw sensor data into actionable insights for city management.
- **Citizen-Centric Design**: Emphasis on how smart city initiatives directly benefit citizens by enhancing public safety, reducing commute times, and improving environmental sustainability.

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