Machine Learning and Data Analytics for Smart Communities

Mining actionable insights from the massive volumes of data in smart communities and using IoT and data analytics to facilitate smart digital health and energy systems.

Competitive advantage

- The most cost-effective way to maximise the value of industrial big data
- Rich and extensive experience in dealing with a variety of problems for smart communities, in particular energy and health
- Agile implementation and flexible deployment
- World-class, high efficiency algorithms, data analytics and cyber-security solutions supported by IoT enabled sensors and cloud technologies

Successful applications

- Smart Grid Smart City national demonstration project
- Energy Internet project
- Customer data disaggregation framework based on IoT sensor systems
- Time-series data forecasting and uncertainty assessment
- Machine learning algorithms and very fast deep learning algorithms for complex system security assessment
- Residential demand simulator based on behavioural models
- Fault diagnosis and monitoring through operational data

Capabilities and facilities

- Package of machine learning and data analytics tools, both opensource and in-house developed
- IoT enabled monitoring hardware devices and associated data management system

More Information

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