



**UNSW**  
SYDNEY

## 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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